

# Year 4 Maths

## Addition

| Concrete                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Pictorial                                                                         | Abstract                                                                          |                                                                                   |   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |   |   |   |      |  |      |      |                                                                                                                                                                                                                                                                                                                                |  |   |   |   |   |   |   |   |  |   |   |   |
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| Add numbers with up to 4 digits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                   |                                                                                   |                                                                                   |   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |   |   |   |      |  |      |      |                                                                                                                                                                                                                                                                                                                                |  |   |   |   |   |   |   |   |  |   |   |   |
| <p>Use a place value grid with counters or base ten to aid adding. Add the ones, then the tens, hundreds and thousands. Remember to exchange when a column exceeds 9 counters.</p> <table border="1"><thead><tr><th>Th</th><th>H</th><th>T</th><th>O</th></tr></thead><tbody><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td>8</td><td>1</td><td>9</td></tr></tbody></table>  | Th                                                                                | H                                                                                 | T                                                                                 | O |  |  |  |  |  |  |  |  | 6 | 8 | 1 | 9 | <p>Draw a representation of a place value grid to show the exchanges made between columns.</p> <table border="1"><tbody><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td>6</td><td>3</td><td>1</td></tr></tbody></table> <p>Draw bar models to represent addition calculations.</p> <table border="1"><tr><td colspan="2">5631</td></tr><tr><td>3442</td><td>2185</td></tr></table> |  |  |  |  |  |  |  |  | 5 | 6 | 3 | 1 | 5631 |  | 3442 | 2185 | <p>Use the formal written column method to add numbers with up to 4 digits. Remember to correctly align the digits and exchange when required.</p> <table border="1"><tr><td></td><td>5</td><td>2</td><td>0</td></tr><tr><td>+</td><td>3</td><td>1</td><td>9</td></tr><tr><td></td><td>8</td><td>4</td><td>0</td></tr></table> |  | 5 | 2 | 0 | + | 3 | 1 | 9 |  | 8 | 4 | 0 |
| Th                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | H                                                                                 | T                                                                                 | O                                                                                 |   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |   |   |   |      |  |      |      |                                                                                                                                                                                                                                                                                                                                |  |   |   |   |   |   |   |   |  |   |   |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |   |   |   |      |  |      |      |                                                                                                                                                                                                                                                                                                                                |  |   |   |   |   |   |   |   |  |   |   |   |
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| 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 8                                                                                 | 1                                                                                 | 9                                                                                 |   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |   |   |   |      |  |      |      |                                                                                                                                                                                                                                                                                                                                |  |   |   |   |   |   |   |   |  |   |   |   |
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| 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 6                                                                                 | 3                                                                                 | 1                                                                                 |   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |   |   |   |      |  |      |      |                                                                                                                                                                                                                                                                                                                                |  |   |   |   |   |   |   |   |  |   |   |   |
| 5631                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                   |                                                                                   |                                                                                   |   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |   |   |   |      |  |      |      |                                                                                                                                                                                                                                                                                                                                |  |   |   |   |   |   |   |   |  |   |   |   |
| 3442                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2185                                                                              |                                                                                   |                                                                                   |   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |   |   |   |      |  |      |      |                                                                                                                                                                                                                                                                                                                                |  |   |   |   |   |   |   |   |  |   |   |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 5                                                                                 | 2                                                                                 | 0                                                                                 |   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |   |   |   |      |  |      |      |                                                                                                                                                                                                                                                                                                                                |  |   |   |   |   |   |   |   |  |   |   |   |
| +                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 3                                                                                 | 1                                                                                 | 9                                                                                 |   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |   |   |   |      |  |      |      |                                                                                                                                                                                                                                                                                                                                |  |   |   |   |   |   |   |   |  |   |   |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 8                                                                                 | 4                                                                                 | 0                                                                                 |   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |   |   |   |   |      |  |      |      |                                                                                                                                                                                                                                                                                                                                |  |   |   |   |   |   |   |   |  |   |   |   |

## Subtraction

| Concrete                                                                                                                                                                                                                                                   | Pictorial    | Abstract |   |   |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |    |   |   |   |  |  |  |  |  |  |  |  |   |  |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |    |   |  |              |              |   |   |   |   |   |   |  |  |  |   |       |  |  |  |   |   |   |   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------|---|---|--|--|--|--|--|--|--|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|---|---|---|--|--|--|--|--|--|--|--|---|--|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|----|---|--|--------------|--------------|---|---|---|---|---|---|--|--|--|---|-------|--|--|--|---|---|---|---|
| Subtract numbers with up to 4 digits                                                                                                                                                                                                                       |              |          |   |   |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |    |   |   |   |  |  |  |  |  |  |  |  |   |  |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |    |   |  |              |              |   |   |   |   |   |   |  |  |  |   |       |  |  |  |   |   |   |   |
| <p>Use place value counters to model exchanging when subtracting.</p> <table><tr><th>Th</th><th>H</th><th>T</th><th>O</th></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table> <p>3342 - 423 = 2919</p> | Th           | H        | T | O |  |  |  |  |  |  |  |  | <p>Draw the place value counters into a place value grid, before subtracting (starting with the ones and working left). Remember to exchange, where necessary.</p> <table><tr><th>Th</th><th>H</th><th>T</th><th>O</th></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table> <p>4835 - 874 = 3961</p> <p>Draw bar models to represent subtraction calculations.</p> <p>4835</p> <table><tr><td colspan="2">?</td><td>874</td></tr></table> | Th | H | T | O |  |  |  |  |  |  |  |  | ? |  | 874 | <p>Use the formal written column method to subtract numbers with up to 4 digits. Remember to correctly align the digits and exchange, where necessary.</p> <table><tr><td>3</td><td>12</td><td>1</td><td></td></tr><tr><td><del>4</del></td><td><del>3</del></td><td>2</td><td>8</td></tr><tr><td>-</td><td>1</td><td>4</td><td>3</td></tr><tr><td></td><td></td><td></td><td>6</td></tr><tr><td colspan="4"><hr/></td></tr><tr><td>2</td><td>8</td><td>9</td><td>2</td></tr></table> | 3 | 12 | 1 |  | <del>4</del> | <del>3</del> | 2 | 8 | - | 1 | 4 | 3 |  |  |  | 6 | <hr/> |  |  |  | 2 | 8 | 9 | 2 |
| Th                                                                                                                                                                                                                                                         | H            | T        | O |   |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |    |   |   |   |  |  |  |  |  |  |  |  |   |  |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |    |   |  |              |              |   |   |   |   |   |   |  |  |  |   |       |  |  |  |   |   |   |   |
|                                                                                                                                                                                                                                                            |              |          |   |   |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |    |   |   |   |  |  |  |  |  |  |  |  |   |  |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |    |   |  |              |              |   |   |   |   |   |   |  |  |  |   |       |  |  |  |   |   |   |   |
|                                                                                                                                                                                                                                                            |              |          |   |   |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |    |   |   |   |  |  |  |  |  |  |  |  |   |  |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |    |   |  |              |              |   |   |   |   |   |   |  |  |  |   |       |  |  |  |   |   |   |   |
| Th                                                                                                                                                                                                                                                         | H            | T        | O |   |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |    |   |   |   |  |  |  |  |  |  |  |  |   |  |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |    |   |  |              |              |   |   |   |   |   |   |  |  |  |   |       |  |  |  |   |   |   |   |
|                                                                                                                                                                                                                                                            |              |          |   |   |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |    |   |   |   |  |  |  |  |  |  |  |  |   |  |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |    |   |  |              |              |   |   |   |   |   |   |  |  |  |   |       |  |  |  |   |   |   |   |
|                                                                                                                                                                                                                                                            |              |          |   |   |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |    |   |   |   |  |  |  |  |  |  |  |  |   |  |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |    |   |  |              |              |   |   |   |   |   |   |  |  |  |   |       |  |  |  |   |   |   |   |
| ?                                                                                                                                                                                                                                                          |              | 874      |   |   |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |    |   |   |   |  |  |  |  |  |  |  |  |   |  |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |    |   |  |              |              |   |   |   |   |   |   |  |  |  |   |       |  |  |  |   |   |   |   |
| 3                                                                                                                                                                                                                                                          | 12           | 1        |   |   |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |    |   |   |   |  |  |  |  |  |  |  |  |   |  |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |    |   |  |              |              |   |   |   |   |   |   |  |  |  |   |       |  |  |  |   |   |   |   |
| <del>4</del>                                                                                                                                                                                                                                               | <del>3</del> | 2        | 8 |   |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |    |   |   |   |  |  |  |  |  |  |  |  |   |  |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |    |   |  |              |              |   |   |   |   |   |   |  |  |  |   |       |  |  |  |   |   |   |   |
| -                                                                                                                                                                                                                                                          | 1            | 4        | 3 |   |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |    |   |   |   |  |  |  |  |  |  |  |  |   |  |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |    |   |  |              |              |   |   |   |   |   |   |  |  |  |   |       |  |  |  |   |   |   |   |
|                                                                                                                                                                                                                                                            |              |          | 6 |   |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |    |   |   |   |  |  |  |  |  |  |  |  |   |  |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |    |   |  |              |              |   |   |   |   |   |   |  |  |  |   |       |  |  |  |   |   |   |   |
| <hr/>                                                                                                                                                                                                                                                      |              |          |   |   |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |    |   |   |   |  |  |  |  |  |  |  |  |   |  |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |    |   |  |              |              |   |   |   |   |   |   |  |  |  |   |       |  |  |  |   |   |   |   |
| 2                                                                                                                                                                                                                                                          | 8            | 9        | 2 |   |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |    |   |   |   |  |  |  |  |  |  |  |  |   |  |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |    |   |  |              |              |   |   |   |   |   |   |  |  |  |   |       |  |  |  |   |   |   |   |

# Year 4 Maths

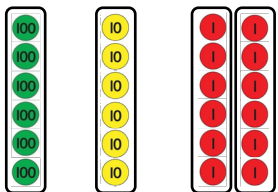
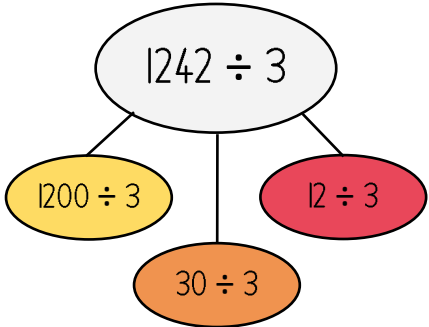
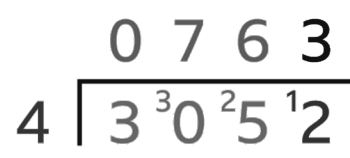
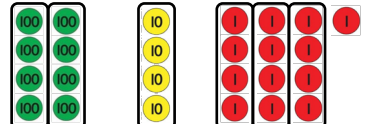
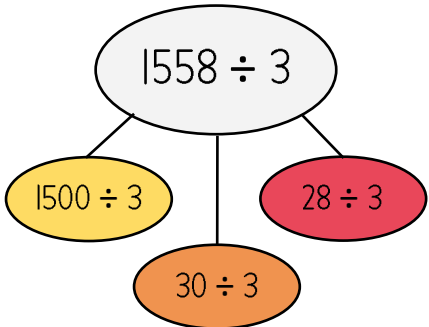
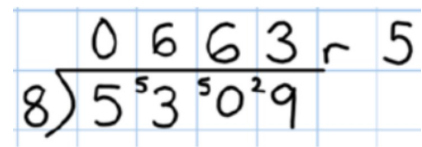
## Multiplication

| Concrete                                                                                                                                                                                                                                                                                                                                                                                                       | Pictorial | Abstract |     |   |  |  |  |  |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |   |      |     |    |   |   |      |     |     |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |   |   |   |  |   |  |  |   |  |  |  |   |   |  |  |   |   |   |  |   |   |   |   |  |   |   |   |   |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------|-----|---|--|--|--|--|---|---|---|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|------|-----|----|---|---|------|-----|-----|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---|---|---|--|---|--|--|---|--|--|--|---|---|--|--|---|---|---|--|---|---|---|---|--|---|---|---|---|--|
| Partitioning to multiply                                                                                                                                                                                                                                                                                                                                                                                       |           |          |     |   |  |  |  |  |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |   |      |     |    |   |   |      |     |     |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |   |   |   |  |   |  |  |   |  |  |  |   |   |  |  |   |   |   |  |   |   |   |   |  |   |   |   |   |  |
| <p>Use base ten or place value counters on a place value grid to partition the number to multiply it, totalling the columns to find the product.</p> <table border="1"><thead><tr><th>Th</th><th>H</th><th>T</th><th>O</th></tr></thead><tbody><tr><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td>4</td><td>2</td><td>9</td></tr></tbody></table> <p></p> <p><math>2143 \times 3 = 6429</math></p> | Th        | H        | T   | O |  |  |  |  | 6 | 4 | 2 | 9 | <p>Reinforce the link between multiplication and repeated addition. Partition the number to multiply it, before recombining the totals to find the product.</p> <table border="1"><thead><tr><th>x</th><th>2000</th><th>100</th><th>40</th><th>3</th></tr></thead><tbody><tr><td>3</td><td>6000</td><td>300</td><td>120</td><td>9</td></tr></tbody></table> <p><math>6000 + 300 + 120 + 9 = 6429</math></p> <p>Use part-whole models to represent the partitioning of a number in order to multiply it. Recombine the totals to find the product.</p> <div><p><math>10 \times 6 = 60</math></p><p><math>18 \times 6 = 108</math></p><p><math>8 \times 6 = 48</math></p></div> | x | 2000 | 100 | 40 | 3 | 3 | 6000 | 300 | 120 | 9 | <p>Use the expanded formal written method to show the multiplication of the different parts of the number. Recombine them to find the product.</p> <table><tr><td></td><td>9</td><td>2</td><td>9</td><td></td></tr><tr><td>x</td><td></td><td></td><td>5</td><td></td></tr><tr><td></td><td></td><td>4</td><td>5</td><td></td></tr><tr><td></td><td>1</td><td>0</td><td>0</td><td></td></tr><tr><td>4</td><td>5</td><td>0</td><td>0</td><td></td></tr><tr><td>4</td><td>6</td><td>4</td><td>5</td><td></td></tr></table> |  | 9 | 2 | 9 |  | x |  |  | 5 |  |  |  | 4 | 5 |  |  | 1 | 0 | 0 |  | 4 | 5 | 0 | 0 |  | 4 | 6 | 4 | 5 |  |
| Th                                                                                                                                                                                                                                                                                                                                                                                                             | H         | T        | O   |   |  |  |  |  |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |   |      |     |    |   |   |      |     |     |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |   |   |   |  |   |  |  |   |  |  |  |   |   |  |  |   |   |   |  |   |   |   |   |  |   |   |   |   |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                |           |          |     |   |  |  |  |  |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |   |      |     |    |   |   |      |     |     |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |   |   |   |  |   |  |  |   |  |  |  |   |   |  |  |   |   |   |  |   |   |   |   |  |   |   |   |   |  |
| 6                                                                                                                                                                                                                                                                                                                                                                                                              | 4         | 2        | 9   |   |  |  |  |  |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |   |      |     |    |   |   |      |     |     |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |   |   |   |  |   |  |  |   |  |  |  |   |   |  |  |   |   |   |  |   |   |   |   |  |   |   |   |   |  |
| x                                                                                                                                                                                                                                                                                                                                                                                                              | 2000      | 100      | 40  | 3 |  |  |  |  |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |   |      |     |    |   |   |      |     |     |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |   |   |   |  |   |  |  |   |  |  |  |   |   |  |  |   |   |   |  |   |   |   |   |  |   |   |   |   |  |
| 3                                                                                                                                                                                                                                                                                                                                                                                                              | 6000      | 300      | 120 | 9 |  |  |  |  |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |   |      |     |    |   |   |      |     |     |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |   |   |   |  |   |  |  |   |  |  |  |   |   |  |  |   |   |   |  |   |   |   |   |  |   |   |   |   |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                | 9         | 2        | 9   |   |  |  |  |  |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |   |      |     |    |   |   |      |     |     |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |   |   |   |  |   |  |  |   |  |  |  |   |   |  |  |   |   |   |  |   |   |   |   |  |   |   |   |   |  |
| x                                                                                                                                                                                                                                                                                                                                                                                                              |           |          | 5   |   |  |  |  |  |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |   |      |     |    |   |   |      |     |     |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |   |   |   |  |   |  |  |   |  |  |  |   |   |  |  |   |   |   |  |   |   |   |   |  |   |   |   |   |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                |           | 4        | 5   |   |  |  |  |  |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |   |      |     |    |   |   |      |     |     |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |   |   |   |  |   |  |  |   |  |  |  |   |   |  |  |   |   |   |  |   |   |   |   |  |   |   |   |   |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                | 1         | 0        | 0   |   |  |  |  |  |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |   |      |     |    |   |   |      |     |     |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |   |   |   |  |   |  |  |   |  |  |  |   |   |  |  |   |   |   |  |   |   |   |   |  |   |   |   |   |  |
| 4                                                                                                                                                                                                                                                                                                                                                                                                              | 5         | 0        | 0   |   |  |  |  |  |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |   |      |     |    |   |   |      |     |     |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |   |   |   |  |   |  |  |   |  |  |  |   |   |  |  |   |   |   |  |   |   |   |   |  |   |   |   |   |  |
| 4                                                                                                                                                                                                                                                                                                                                                                                                              | 6         | 4        | 5   |   |  |  |  |  |   |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |   |      |     |    |   |   |      |     |     |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |   |   |   |  |   |  |  |   |  |  |  |   |   |  |  |   |   |   |  |   |   |   |   |  |   |   |   |   |  |

| Column multiplication                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Use place value counters to represent multiplication calculations.</p> <p><math>2135 \times 3 = ?</math></p> <p> <math>3 \times 5 \text{ ones} = 15</math><br/> <math>3 \times 3 \text{ tens} = 90</math><br/> <math>3 \times 1 \text{ hundred} = 300</math><br/> <math>3 \times 2 \text{ thousands} = 6000</math> </p> <p><math>6000 + 300 + 90 + 15 = 6405</math></p> | <p>Use place value equipment alongside an expanded column method to explore how they are related.</p> <pre>       2 7 4 1     x   6     -----       1 2 0 0 0      4 2 0 0     2 4 0     -----     1 6 4 4 6           </pre> | <p>Explore how the expanded column multiplication method relates to the compact method.</p> <pre>       2 7 4 1     x   6     -----       1 2 0 0 0      4 2 0 0     2 4 0     -----     1 6 4 4 6           </pre> <p>...becomes...</p> <pre>       2 7 4 1     x   6     -----     1 6 4 4 6           </pre> |

# Year 4 Maths

## Division

| Concrete                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Pictorial                                                                                                                                                                                                                                                                                                                                                                                            | Abstract                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flexible partitioning to divide                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                    |
| <p>Use place value counters to flexibly partition the number into multiples of the divisor.</p> <p><math>672 \div 6 = ?</math></p>  <p> <math>600 \div 6 = 100</math><br/> <math>60 \div 6 = 10</math><br/> <math>12 \div 6 = 2</math><br/> <math>672 \div 6 = 112</math> </p>                                                                                             | <p>Demonstrate flexible partitioning in part-whole models, before recombining to find the answer.</p>  <p> <math>1200 \div 3 = 400</math><br/> <math>30 \div 3 = 10</math><br/> <math>12 \div 3 = 4</math><br/> <math>1242 \div 3 = 414</math> </p>                                                                | <p>Progress to representing division calculations in a short division method.</p>                                                               |
| Flexible partitioning to divide - with remainders                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                    |
| <p>Use place value counters to flexibly partition the number into multiples of the divisor as far as you can. Anything left is a remainder.</p> <p><math>853 \div 4 = ?</math></p>  <p> <math>800 \div 4 = 200</math><br/> <math>40 \div 4 = 10</math><br/> <math>13 \div 4 = 3 \text{ remainder } 1</math><br/> <math>853 \div 4 = 213 \text{ remainder } 1</math> </p> | <p>Demonstrate flexible partitioning in part-whole models, before recombining to find the answer and any remainders.</p>  <p> <math>1500 \div 3 = 500</math><br/> <math>30 \div 3 = 10</math><br/> <math>28 \div 3 = 9 \text{ remainder } 1</math><br/> <math>1558 \div 3 = 519 \text{ remainder } 1</math> </p> | <p>Represent division calculations in a short division method, recording any remainders at the end of the calculation, after the answer.</p>  |