

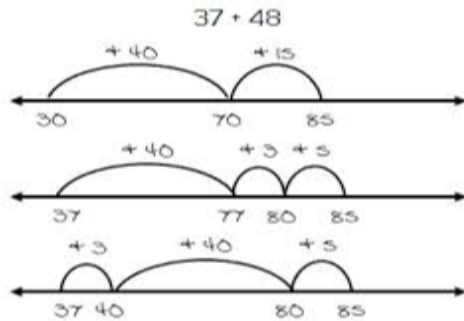
# Mental Maths/Number Talks Strategies

## Addition

### Adding Up in Chunks/Counting On

On

$$37 + 48$$



### Reordering

$$25 + 26 + 75$$



$$100 + 26 = 126$$

### Place Value - Partitioning

$$116 + 127$$

$$100 + 100 = 200$$

$$10 + 20 = 30$$

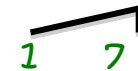
$$6 + 7 = 13$$

$$200 + 30 + 13 = 243$$

### Making Tens/Bridging through

10

$$49 + 38$$



$$50 + 37 = 87$$

### Compensation

$$67 + 28$$

+2

/

$$67 + 30 = 97$$

$$97 - 2 = 95$$

### Doubles/Near Doubles

$$16 + 17$$



$$16 + 16 = 32$$

$$32 + 1 = 33$$

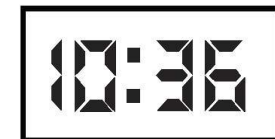
### Friendly Numbers

$$28 + 47$$

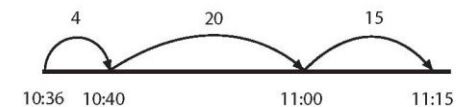
+2 -2

$$30 + 45 = 75$$


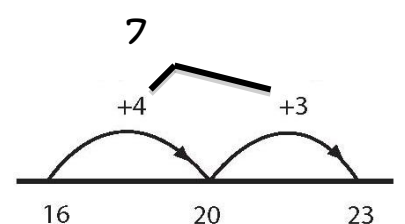
### Bridging through 60



How many minutes is it to the next hour?



## Mental Maths/Number Talks Strategies Subtraction

|  |  |  |   |
|--|--|--|---|
| <p><u>Removal or Counting Back</u></p> <p><b>123 - 69</b><br/> <b>123 - (20+40+3+6)</b><br/> <b>123 - 20 = 103</b><br/> <b>103 - 40 = 63</b><br/> <b>63 - 3 = 60</b><br/> <b>60 - 6 = 54</b></p>                                     | <p><u>Reordering</u></p> <p style="text-align: center;"><b>25 - 6 - 5</b></p>  <p><b>20 - 6 = 14</b></p>                    | <p><u>Place Value - Partitioning</u></p> <p style="text-align: center;"><b>367 - 154</b></p> <p style="text-align: center;">367 - 100 = 267<br/> 267 - 50 = 217<br/> 217 - 4 = 213</p> <p style="text-align: center;">367 - 100 - 50 - 4 = 213</p> | <p><u>Adding Up/Bridging through 10</u></p> <p style="text-align: center;"><b>23 - 16</b></p> <p style="text-align: center;">16 + 4 = 20<br/> 20 + 3 = 23</p>  |
| <p><u>Place Value &amp; Negative Numbers</u></p> <p style="text-align: center;"><b>399 - 254</b></p> <p>(300+90+9) - (200+50+9)</p> <p style="text-align: center;">300 + 90 + 9<br/> - 200 + 50 + 4<br/> 100 + 40 + 5<br/> = 145</p> | <p><u>Adjusting for Easier Numbers</u></p> <p style="text-align: center;"><b>123 - 59</b></p> <p style="text-align: center;"><b>+1</b></p> <p style="text-align: center;">123 - 60 = 63<br/> 63 + 1 = 64</p> | <p><u>Keep a Constant Difference</u></p> <p style="text-align: center;"><b>151 - 98</b></p> <p style="text-align: center;">(151 + 2) - (98 + 2)<br/> 153 - 100 = 53<br/> 151 - 98 = 53</p>   |   |

# Mental Maths/Number Talks Strategies

## Multiplication & Division

|  |   |   |   |          |          |            |           |   |   |
|--|---|---|---|----------|----------|------------|-----------|---|---|
| <p><u>Friendly Numbers</u></p> <p><b><math>9 \times 15</math></b><br/> <math>10 \times 15 = 150</math><br/> <math>150 - 15 = 135</math></p> <p>Don't forget to 'undo' your change!</p>                                   | <p><u>Repeated Addition</u></p> <p><b><math>6 \times 15</math></b><br/> <math>15+15+15+15+15+15</math><br/> <math>15 + 15 = 30</math><br/> <math>30 + 15 = 45</math><br/> <math>45 + 15 = 60</math><br/> <math>60 + 15 = 75</math><br/> <math>75 + 15 = 90</math></p>                               | <p><u>Partial Products</u></p> <p><b><math>6 \times 125</math></b><br/> <math>6 \times (100 + 20 + 5)</math><br/> <math>(6 \times 100) + (6 \times 20) + (6 \times 5)</math><br/> <math>600 + 120 + 30 = 750</math></p> | <p><u>Doubling and Halving</u></p> <p><b><math>24 \times 8</math></b><br/> <math>\times 2 \quad \div 2</math><br/> <b><math>48 \times 4</math></b><br/> <math>\times 2 \quad \div 2</math><br/> <b><math>96 \times 2</math></b><br/> <math>\times 2 \quad \div 2</math><br/> <b>192</b></p> |          |          |            |           |   |   |
| <p><u>Breaking Factors into Smaller Factors</u></p> <p><b><math>12 \times 25</math></b><br/> <math>\wedge</math><br/> <math>2 \times 6</math><br/> <math>2 \times 25 = 50</math><br/> <math>50 \times 6 = 300</math></p> | <p><u>Grid Method</u></p> <p><b><math>35 \times 7</math></b></p> <table border="1" data-bbox="667 954 1025 1061"> <tr> <td><b>x</b></td> <td><b>30</b></td> <td><b>5</b></td> </tr> <tr> <td><b>7</b></td> <td><b>210</b></td> <td><b>35</b></td> </tr> </table> <p><math>210 + 35 = 245</math></p> | <b>x</b>  | <b>30</b>   | <b>5</b> | <b>7</b> | <b>210</b> | <b>35</b> | <p><u>Partial Quotients</u></p> $  \begin{array}{r}  \phantom{15} \overline{) 550} \phantom{0} \\  \underline{- 150} \phantom{0} \phantom{0} \phantom{0} \phantom{0} \\  400 \phantom{0} \phantom{0} \phantom{0} \phantom{0} \\  \underline{- 300} \phantom{0} \phantom{0} \phantom{0} \phantom{0} \\  100 \phantom{0} \phantom{0} \phantom{0} \phantom{0} \\  \underline{- 30} \phantom{0} \phantom{0} \phantom{0} \phantom{0} \\  70 \phantom{0} \phantom{0} \phantom{0} \phantom{0} \\  \underline{- 60} \phantom{0} \phantom{0} \phantom{0} \phantom{0} \\  10  \end{array}  $ <p>36 R 10</p> | <p><u>Multiplying Up</u></p> <p><b><math>72 \div 8</math></b><br/> <math>8 \times 5 = 40</math><br/> <math>8 \times 4 = 32</math><br/> <math>(5 + 4) = (40 + 32)</math><br/> <math>8 \times 9 = 72</math></p> |
| <b>x</b>   | <b>30</b>   | <b>5</b>  |   |          |          |            |           |   |   |
| <b>7</b>   | <b>210</b>  | <b>35</b>   |   |          |          |            |           |   |   |
| <p><u>Repeated Subtraction</u></p> <p><math>24 \div 6</math>      <math>24 - 6 - 6 - 6 - 6</math>      <math>6 \times 4 = 24</math> SO <math>24 \div 6 = 4</math></p>  |   |   |   |          |          |            |           |   |   |