<table>
<thead>
<tr>
<th>Suggest a simple method to add 99 and 38.</th>
<th>Work out $8 + 2 \times 5$.</th>
</tr>
</thead>
<tbody>
<tr>
<td>$100 + 38 = 138$</td>
<td>You should multiply first (unless brackets tell you otherwise): $8 + 2 \times 5$ $= 8 + 10$ $= 18$</td>
</tr>
<tr>
<td>$138 - 1 = 137$</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Work out $3(8 + 2)$.</th>
<th>What is half of a half?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do the brackets first:</td>
<td>A quarter</td>
</tr>
<tr>
<td>$3(8 + 2)$</td>
<td></td>
</tr>
<tr>
<td>$= 3 \times 10$</td>
<td></td>
</tr>
<tr>
<td>$= 30$</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What do you get if you add one half to one quarter?</th>
<th>What is $\frac{4}{8}$ written in its simplest form?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three quarters</td>
<td>$\frac{1}{2}$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Work out $\frac{1}{4} + 1 \frac{1}{2}$.</th>
<th>How many decimal places does 3.4652 have? Round it to 2 decimal places.</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\frac{2}{4}$</td>
<td>3.4652 has four decimal places</td>
</tr>
<tr>
<td>$3$</td>
<td>To 2 decimal places, it is 3.47</td>
</tr>
</tbody>
</table>

© www.teachitmaths.co.uk 2013  21170  Page 1 of 5
<table>
<thead>
<tr>
<th>What is the smallest whole number which will round up to 40?</th>
<th>What is 729 to the nearest hundred?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>700</td>
</tr>
</tbody>
</table>
| What percentage is the same as one half? | a. What is 3% of £1?  
b. What is 3% of £6? |
|                                                          | 50%                               |
|                                                          | a. 3p                             |
|                                                          | b. 18p                            |
| The temperature is 3°C. It drops by 8°C. What is the temperature now? | Work out:  
a. $5 - 9$  
b. $6 + (-11)$  
c. $3 \times -5$ |
|                                                          | $3 - 8 = -5^\circ C$             |
|                                                          | a. $-4$                           |
|                                                          | b. $-5$                           |
|                                                          | c. $-15$                          |
| List all the factors of 12. | What are all the common factors of 15 and 45? |
| It is useful to find them in pairs: | Find all the factors of 15, and give ones which are also a factor of 45: |
| 1 and 12  
2 and 6  
3 and 4 | 1, 3, 5 and 15 |
<table>
<thead>
<tr>
<th>What is the highest common factor of 12 and 15?</th>
<th>What is the lowest common multiple of 30 and 40?</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>120</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>If I buy 5 pencils for 35 pence, how much should I pay for 3 pencils?</th>
<th>A dress is in a sale, with ( \frac{1}{3} ) off. The dress originally cost £36. How much does it cost now?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 pencil: ( 35 \div 5 = 7p )</td>
<td>( \frac{1}{3} \times 36 = £12 )</td>
</tr>
<tr>
<td>3 pencils: ( 3 \times 7 = 21p )</td>
<td>( 36 - 12 = £24 )</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Arrange these numbers from smallest to largest:</th>
<th>Without a calculator, work out ( 341 \times 92 ).</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.3, ( \frac{2}{3} ), 50%, ( \frac{1}{10} ), 0.7</td>
<td>Convert them all into decimals to work it out, but remember to give your answer using the original numbers!</td>
</tr>
<tr>
<td>( \frac{1}{10} ), 0.3, 50%, ( \frac{2}{3} ), 0.7</td>
<td>31372</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Burt is 5 times older than Luke. Burt is 65. How old is Luke?</th>
<th>A necklace has 30 beads: 5 are red, 10 are blue and the rest are black. What is the ratio of red, blue and black beads?</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>5 red : 10 blue : 15 black</td>
</tr>
<tr>
<td></td>
<td>( 1 : 2 : 3 )</td>
</tr>
<tr>
<td><strong>‘All multiples of 5 end in 5.’</strong></td>
<td><strong>What do we mean when we say ‘a multiple of 6’?</strong></td>
</tr>
<tr>
<td>---------------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>True or false? Explain your answer.</td>
<td>A number which can be exactly divided by 6.</td>
</tr>
<tr>
<td>False – they could end in 5 or 0</td>
<td>Or you could say ‘A number which is in the six-times table’.</td>
</tr>
<tr>
<td></td>
<td>6, 12, 18, 24, 30 ...</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Give the next two numbers in these sequences:</strong></th>
<th><strong>a. State an odd square number.</strong></th>
<th><strong>b. State an even cube number.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. 2, 6, 10, 14 ...</td>
<td>b. 1, 4, 9, 16 ...</td>
<td>a. 18, 22 (add four each time)</td>
</tr>
<tr>
<td>b. 25, 36 (square numbers)</td>
<td></td>
<td>b. 25, 36 (square numbers)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How do we write ‘two cubed’, and how do is it calculated?</th>
<th><strong>What is a prime number?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>[2^3] [2^3 = 2 \times 2 \times 2] [= 8]</td>
<td>A number which can only be divided by one and itself.</td>
</tr>
<tr>
<td></td>
<td>Or you could say: ‘a prime number only has one pair of factors’.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>What is the largest prime number less than 10?</strong></th>
<th><strong>What is the smallest prime number greater than 10?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>What is the cost of 5 pencils at ( m ) pence each?</td>
<td>( 5m )</td>
</tr>
<tr>
<td>How do we write ( s \times s \times s )?</td>
<td>( s^3 )</td>
</tr>
<tr>
<td>Simplify: ( 4x + 2y + 6x - y )</td>
<td>( 6x + y )</td>
</tr>
<tr>
<td>Double ( 3x + 2 ).</td>
<td>( 6x + 4 )</td>
</tr>
<tr>
<td>Expand ( 5(2y - 3) ).</td>
<td>( 10y - 15 )</td>
</tr>
<tr>
<td>Solve the equation: ( 3x + 6 = 15 )</td>
<td>( 3x = 9 ) ( x = 3 )</td>
</tr>
<tr>
<td>If ( x = 4 ), what is the value of ( 3x - 2 )?</td>
<td>( 3x - 2 = 3 \times 4 - 2 = 10 )</td>
</tr>
<tr>
<td>A bus travels at 40 miles per hour. How far will it go in 3 hours?</td>
<td>40 miles in one hour 120 miles in three hours</td>
</tr>
</tbody>
</table>

© www.teachitmaths.co.uk 2013