


Name: _____

October 15th	5-a-day	Numeracy
<p>Two numbers are multiplied together and the answer is 26.</p> <p>Write down two possible numbers.</p> <p>1 & 26</p>	<p>2 & 13</p> <p>0.5 & 52</p> <p>etc</p>	
<p>Work out $\frac{1}{3}$ of 27</p> <p>9</p>	<p>Work out $\frac{2}{5}$ of 50</p> <p>20</p>	
<p>9cm</p>  <p>4cm</p> <p>9x4</p>	<p>Find the area of the rectangle.</p> <p>36cm²</p>	
<p>Find the perimeter of the rectangle.</p> <p>9 + 9 + 4 + 4</p> <p>26cm</p>	<p>A square has a perimeter of 28cm.</p> <p>What is the area of the square?</p> <p>28 ÷ 4 = 7</p> <p>7 × 7 = 49cm²</p>	
<p>Martin thinks of a number.</p> <p>He doubles it.</p> <p>He adds 11.</p> <p>His answer 25.</p> <p>25 - 11 = 14</p> <p>14 ÷ 2 = 7</p>	<p>What was his number?</p> <p>7</p>	

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<p>Trains leave Antrim to Belfast every 25 minutes to Ballymena every 20 minutes.</p> <p>They both leave Antrim at 11am. At what time will they both leave Antrim at the same time?</p>	<p>25 50 75 100 20 40 60 80 100 100 min = 1 hr 40 min 12:40 pm</p>											
<p>Dennis sells car and home insurance. Car insurance costs £400. Home insurance costs £250.</p> <p>Each month Dennis earns £800, 5% of the car insurance sold and 20% of the home insurance sold.</p> <p>In April Dennis sold 5 car insurances and 5 home insurance. Work out his total pay.</p>	<p>car in: 5% of 400 = £20</p> <p>home in: 20% of 250 = £50</p> <p>$800 + (5 \times 20) + (5 \times 50)$ $800 + 100 + 250$ $= £1150$</p>											
<p>James wants to find out the colours of T-shirts worn in a gym.</p> <p>Design a suitable table for data collection.</p>	<table border="1" style="border-collapse: collapse; text-align: center;"> <tr> <td style="border: none;">red</td> <td style="border: none;">white</td> <td style="border: none;">black</td> <td style="border: none;">blue</td> <td style="border: none;">other</td> </tr> <tr> <td style="border: 1px dotted red; width: 20px; height: 100px;"></td> <td style="border: 1px dotted red; width: 20px; height: 100px;"></td> <td style="border: 1px dotted red; width: 20px; height: 100px;"></td> <td style="border: 1px dotted red; width: 20px; height: 100px;"></td> <td style="border: 1px dotted red; width: 20px; height: 100px;"></td> </tr> </table>		red	white	black	blue	other					
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<p>Expand and simplify</p> <p>$(y + 3)(y + 5)$</p>	<p>$y^2 + 8y + 15$</p>											

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October 15	5-a-day	Higher
<p>Find the reciprocal of 1.5</p> $1.5 = \frac{3}{2}$ $\frac{2}{3}$	<p>Find the reciprocal of 0.15</p> $0.15 = \frac{3}{20}$ $\frac{20}{3} \text{ or } 6\frac{2}{3}$	
<p>Complete the tree diagram.</p> <p> $PW = \frac{5}{8} \times \frac{3}{8} = \frac{15}{64}$ $WB = \frac{3}{8} \times \frac{5}{8} = \frac{15}{64}$ </p>	<p>Natalie has 8 socks in a drawer. 5 of the socks are black. 3 of the socks are white.</p> <p>Natalie takes out a sock at random, writes down its colour and puts it back into the drawer. Then Natalie takes out a second sock, at random, and writes down its colour.</p>	
	<p>Work out the probability both socks are different colours.</p> $\frac{15}{64} + \frac{15}{64} = \frac{30}{64} = \frac{15}{32}$	
	<p>Find y.</p> $a^2 = b^2 + c^2 - 2bc \cos A$ $y^2 = 18^2 + 20^2 - 2 \times 18 \times 20 \times \cos 40$ $y^2 = 172.448001$ $y = 13.13 \text{ cm}$	
<p>Prove that $(n+1)^2 - (n-1)^2 + 3$ is always odd for all positive integer values of n.</p>	$(n+1)(n+1) - (n-1)(n-1) + 3$ $n^2 + 2n + 1 - (n^2 - 2n + 1) + 3$ $4n + 3$ <p>even + odd = odd QED</p>	