| Day 250 | B Tier 10-a-day |
|---|---|
| **1** Work out<br>(a) $\frac{7}{8} \times \frac{1}{4}$<br>(b) $\frac{3}{5} \div \frac{8}{9}$<br>Give each answer in its simplest form. | |
| **2** Simplify fully<br>(a) $15t^4 \div 5t^2$<br>(b) $(y^3)^2$ | |
| **3** The ratio of pencils to pens among the items in a case is 9 : 8.<br>There are 24 pens.<br>How many pencils are there? | |
| **4** (a) Owen scores 62 out of 80 in a quiz. Write this as a percentage.<br>(b) Write £1.10 as a percentage of £5. | |
| **5** (a) The point P(4, −5) is rotated 90° clockwise about the origin. Write down the coordinates of the image.<br>(b) The point P(4, −5) is translated by the vector $\begin{pmatrix} 3 \\ -3 \end{pmatrix}$. Write down the coordinates of the image. | |

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| **6** The probability that a biased dice lands on a six is $\frac{1}{5}$.<br>Work out how many times you would expect this to happen in 240 rolls of the dice. | |
| **7** Triangle ABC is isosceles with AB = AC = 13 m.<br>The base BC = 24 m.<br>(a) Work out the perpendicular height of the triangle.<br>(b) Work out the area of the triangle. | |
| **8** The number x is rounded to the nearest 100.<br>The result is 6700.<br>Write down the error interval for x. | |
| **9** Solve $\frac{5x + 10}{5} = 5$ | |
| **10** A plane travels on a bearing of 040°.<br>It then turns right through 60° and continues in a straight line.<br>Work out the new bearing. | |