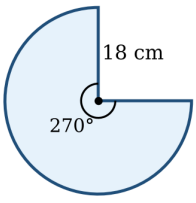
| Day 228 | A Tier 10-a-day |
|---|---|
| **1** Here are the ingredients for 10 flapjacks.<br>Water: 750 ml<br>Oats: 400 g<br>Sugar: 150 g<br>(a) Work out how much water is needed for 2 flapjacks.<br>(b) Hannah has 709 g of oats. What is the greatest number of flapjacks she can make? | |
| **2** Work out $4\frac{3}{4} - 4\frac{1}{5}$<br>Give your answer as a mixed number in its simplest form. | |
| **3** Solve $6(x - 3) = -4(x - 5) - 8$ | |
| **4** (a) Simplify $\sqrt{180}$<br>(b) Simplify $\sqrt{180} - \sqrt{125}$ | |
| **5** A triangle has sides of length 42 m, 9 m and 40 m.<br>Is the triangle right-angled?<br>You must show your working. | |

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| **6** Solve $2x^2 - 9x - 2 = 0$<br>Give your solutions correct to 2 decimal places.<br>(Calculator) | |
| **7** y is directly proportional to the cube of x.<br>When x = 5, y = 875.<br>(a) Find a formula for y in terms of x.<br>(b) Work out the value of y when x = 2. | |
| **8** Work out $2.6 \times (1 + 2.1 \div 100)^3$ (Calculator)<br>Give your answer correct to 3 significant figures. | |
| **9** The diagram shows a sector of a circle of radius 18 cm.<br>Work out the perimeter of the sector.<br>Give your answer in terms of $\pi$.<br>The diagram is not drawn accurately.<br> | |
| **10** Work out the value of $2a^2 + 4ab - 2b^2$<br>when $a = -4$ and $b = 3$ | |