**Day 347** **B Tier 10-a-day**

**1** Write these numbers in order of size.
Start with the smallest number.
0.78, 0.66, 0.7, 0.774

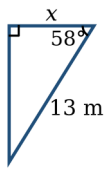
**2** The ratio of cats to dogs among the pets at a rescue centre is 3 : 2.
There are 14 dogs.
How many cats are there?

**3** Complete the table of values for $y = -4x + 5$

| x | 0 | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|
| y | | | | −7 | −11 |

**4** Work out
(a) $\frac{3}{5} \times \frac{1}{3}$
(b) $\frac{2}{9} \div \frac{2}{3}$
Give each answer in its simplest form.

**5** Calculate the length of x. (Calculator)
Give your answer correct to 1 decimal place.
The diagram is not drawn accurately.



| Day 347 | B Tier 10-a-day |
|---|---|
| **6** A new car is worth £15,000. (Calculator)<br>Each year its value falls by 25% of its value at the start of that year.<br>Work out the value of the car after 2 years. | |
| **7** A triangle has sides of length x cm, (x + 1) cm and (2x − 2) cm.<br>The perimeter of the triangle is 27 cm.<br>(a) Work out the value of x.<br>(b) Work out the length of the longest side. | |
| **8** Work out<br>(a) $5^{-2}$<br>(b) $3^{0} + \sqrt{64}$ | |
| **9** A bag contains 2 green beads and 4 yellow beads.<br>Gita takes one at random and does not replace it, then takes a second.<br>Work out the probability that both are green. | |
| **10** A rectangle has length (4x + 5) m and width (3x + 3) m.<br>The perimeter of the rectangle is 114 m.<br>(a) Work out the value of x.<br>(b) Work out the area of the rectangle. | |