| Day 296 | B Tier 10-a-day |
|---|---|
| **1** Work out<br>(a) $(7 + 12) \times 3 - 9$<br>(b) $12 + 3 \times 2^2$ | |
| **2** Work out the value of $5a + 6b$<br>when $a = -6$ and $b = 6$ | |
| **3** A bike costs £300. In a sale the price is reduced by 35%.<br>(a) Work out the new price.<br>(b) A car is worth £6000. Its value goes down by 12% in a year. Work out its new value. | |
| **4** (a) Write down the inequality shown on the number line.<br>(b) Write down all the integers that satisfy the inequality.<br> | |
| **5** Write down all the common factors of 9 and 15. | |

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**6** A cube has side length 2 cm.
Work out the total surface area of the cube.

**7** The table shows the pets owned by each student in a class.
(a) Write down the mode.
(b) Work out the median.

| Pets | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Frequency | 6 | 10 | 5 | 6 |

**8** Solve the simultaneous equations
$x + 3y = -6$
$4x - 6y = 30$

**9** A kite flies at 40 metres per second.
Work out this speed in kilometres per hour.

**10** A rectangle is 4 cm long and 8 cm wide.
It is enlarged by scale factor 2.5.
(a) Write down the length and width of the enlarged rectangle.
(b) Work out the perimeter of the enlarged rectangle.