Day 27 **B Tier 10-a-day**

1 A pencil costs p pence.
A pen costs 20 pence more than a pencil.
(a) Write an expression, in terms of p, for the cost of a pen.
(b) Write an expression, in terms of p, for the total cost of 2 pencils and 4 pens. Give your answer in its simplest form.

2 (a) Write down all the factors of 30.
(b) Write down all the multiples of 6 between 35 and 53.

3 Complete the table of values for y = x + 1

x	−2	−1	0	1	2
y	−1		1		

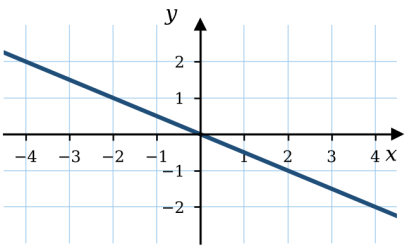
4 Work out
(a) $\frac{3}{10} \times \frac{3}{5}$
(b) $\frac{1}{2} \div \frac{1}{5}$
Give each answer in its simplest form.

5 £1 = 1.25 Swiss francs
A holiday costs 125 francs.
Work out the cost in pounds.

Day 27 **B Tier 10-a-day**

6 A ladder 25 m long leans against a vertical wall. The foot of the ladder is 15 m from the wall. Work out how high up the wall the ladder reaches.

7 The diagram shows a straight line.
(a) Work out the gradient of the line.
(b) Find the equation of the line.



8 The price of a laptop is £160.
The price is first reduced by 40%, then the new price is increased by 5%.
(a) Work out the final price.
(b) Work out the overall percentage decrease in the price.

9 £4,000 is invested for 2 years at 4% compound interest per year. (Calculator)
Work out the total interest earned.

10 A boat sails 7 km on a bearing of 270° from P to Q, then 24 km on a bearing of 000° to R. (Calculator)
(a) Work out the distance PR.
(b) Work out the bearing of R from P.
Give your answers correct to 1 decimal place.

