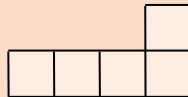## Quick Quiz

(1) Work out $834 \div 6$, without a calculator.

(2) Work out $11^2 - 7^2$, without a calculator.

(3) An accurate plan of a hall is drawn, using a scale of $1:200$.
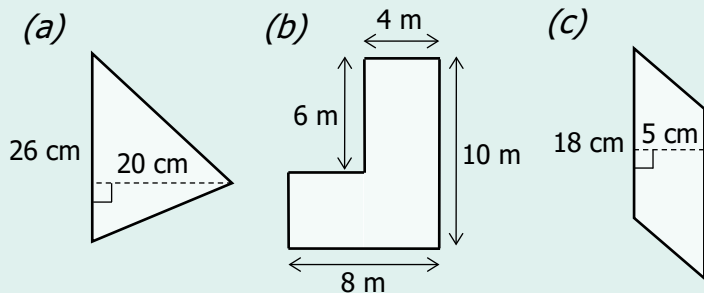
A ramp is 3 cm long on the plan. What is the real length of the ramp, in metres?

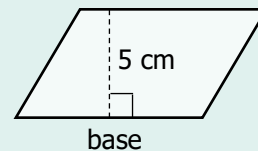(4) Add a square so that this is a net of a cube.

Review of Session 2

(1) Work out the areas of these shapes.

(a)

26 cm   20 cm

(b)   4 m

6 m   10 m

8 m

(c)

18 cm   5 cm

(2) The area of this parallelogram is 42 cm². Work out the length of the base.

5 cm

base

The focus for today's session is...

Fractions and ratios

Reminder

To simplify a fraction, **divide** the numerator and denominator by the **same number**:

$$\frac{4}{10} \overset{\div 2}{\underset{\div 2}{=}} \frac{2}{5} \qquad \frac{24}{54} \overset{\div 6}{\underset{\div 6}{=}} \frac{4}{9}$$

You can simplify a ratio in the same way:

Simplify $8:28$ by dividing both numbers by 4:

$$8:28 = \underline{2:7}$$

Practice Questions

(1) Simplify each fraction as far as possible:

(a) $\dfrac{8}{18}$ (b) $\dfrac{15}{21}$ (c) $\dfrac{35}{100}$ (d) $\dfrac{30}{45}$

(2) Simplify each ratio as far as possible:
(a) $6:14$ (b) $25:35$
(c) £1.20 : 80p   (d) 2.4 m : 66 cm

(3) In Year 11 there are 80 girls and 64 boys. What is the ratio of girls : boys, in its simplest form?

(4) I go shopping with £60 and when I return I have £25 left. What fraction of the money did I spend? Give the answer in its simplest form.