

# 6.3 Assignment

## PRACTISE YOUR NEW SKILLS

- 1 The scale ratio (model original) between two diagrams is 3:5. If one measure on the model is 45 mm, what was the measure on the original?

75mm

- 2 Draw a square with sides of 2 cm, and a second square with sides that are 3 cm

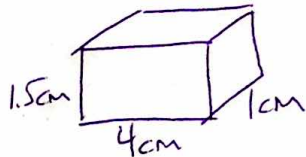
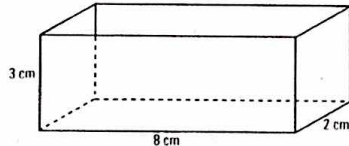
- a) Is the second square similar to the first? Explain your reasoning

Yes since the sides are proportional

- b) If you draw a rectangle whose sides are 5 cm and 8 cm, and a second rectangle with sides that are 3 cm longer, will the two be similar? Explain your reasoning

No, not similar since sides aren't proportional

- 3 Draw a rectangular prism similar to the one shown below with sides that are  $\frac{1}{2}$  the length of the original.



- 4 A poster shows a photograph of a cruise ship. The actual ship is 310 metres long. In the photograph, the cruise ship is 1.2 m long.

- a) What is the scale factor (to 4 decimal places)?

$$sf = 0.0039$$

- b) A person 1.8 m tall was standing on the deck of the cruise ship when the photo was taken. How tall is the person on the photo (to the nearest tenth of a centimetre)?

0.7cm

- 5 A sporting goods store has miniature versions of tents on display. A six-person tent is 12' long by 10' wide. The miniature version has a length of  $1\frac{1}{2}$ .

- a) What is the width of the miniature version?

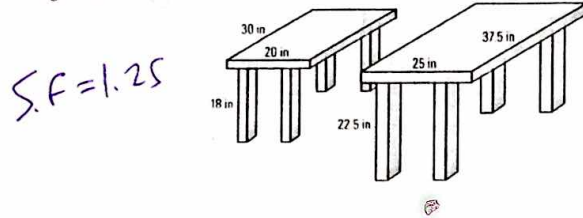
1.25'

- b) What is the scale ratio (miniature actual)?

1:8 or  $\frac{1}{8}$

**BUILD YOUR SKILLS**

4. Simrin has built two end tables. The second table is a slightly larger version of the first. Given the dimensions below, calculate what scale factor Simrin used to make the larger table.



5. A craft store uses small gift boxes to wrap purchases. They have one box that is 20 cm by 12 cm by 5 cm. Another box is larger by a scale factor of 1.3. What are the dimensions of the larger box?

$26\text{ cm} \times 15.6\text{ cm} \times 6.5\text{ cm}$

6. Hazuki made a kite with the dimensions shown below. She decided it would work better if it were bigger. If her new kite tail has a length of 49 cm, what scale factor did she use, and what are the kite's other dimensions?

length = 70 cm  
upper portion = 14 cm  
half-width = 35 cm

