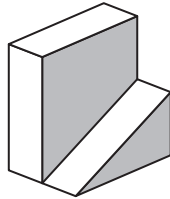
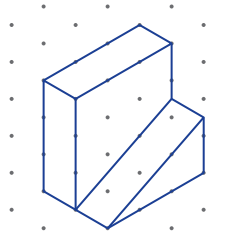


Chapter Review

1. a) Create an isometric drawing of this object.

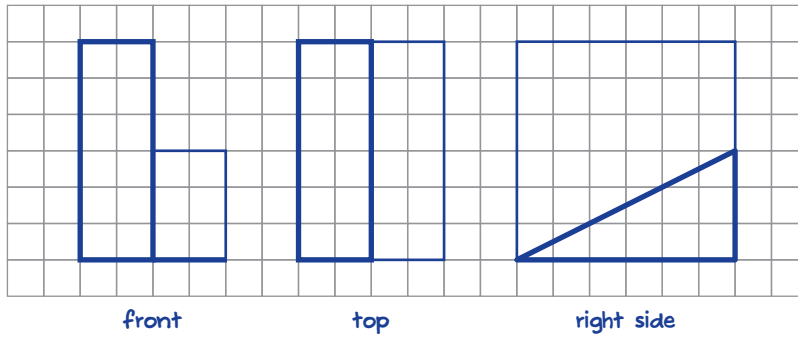


e.g.,

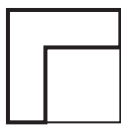


b) Draw the front, top, and right-side views of the object in Part a).

e.g.,



2. Create an isometric drawing of the object shown in these views.



top

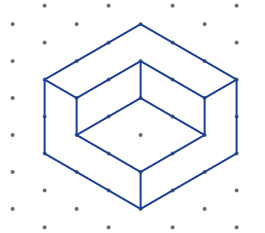


front

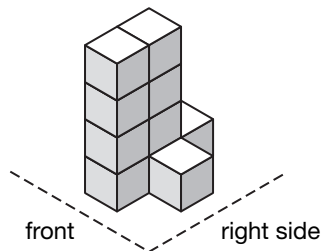


right side

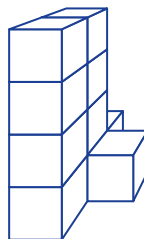
e.g.,



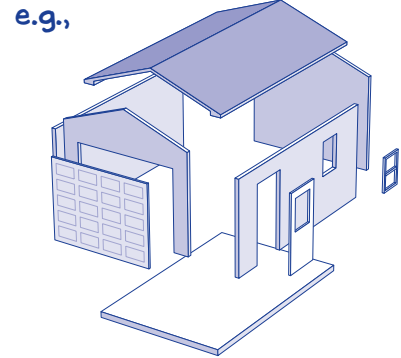
3. Make a one-point perspective drawing of this cube structure.



e.g.,



4. Draw an exploded view of this garage.



5. A scale on a map of Nunavut shows that 2 cm on the map represents 15 km.

a) What is the scale ratio on this map?

$$2 \text{ cm} = 0.02 \text{ m} \qquad 15 \text{ km} = 15\,000 \text{ m}$$

$$\text{e.g., } \frac{0.02}{15\,000} = \frac{2}{1\,500\,000}, \text{ or } 1:750\,000$$

b) What is the scale factor? What does it mean?

e.g., The scale factor is 750 000. That means a distance on the map is multiplied by 750 000 to determine the actual distance on land.

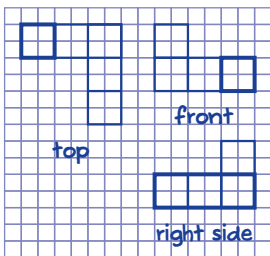
c) The distance between Brandon and Winnipeg is 200 km. What is this distance on the map?

$$\text{e.g., } 200 \text{ km} = 200\,000 \text{ m, or } 20\,000\,000 \text{ cm}$$

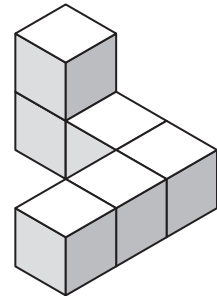
$$20\,000\,000 \text{ cm} \times \frac{1}{750\,000} = 26.666... \text{ cm}$$

The distance on the map is about 27 cm.

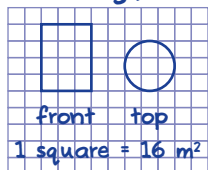
6. e.g.,



6. This cube structure was made using 1 cm linking cubes. Use grid paper. Draw a 2:1 scale diagram of the top, front, and right-side views.



7. a) e.g.,



7. a) A cylindrical gas storage tank has a diameter of 12.0 m. Its height is 16.0 m. Use technology. Draw a scale diagram of the top and front views of the tank.

b) How might someone use a scale drawing of a gas storage tank?

e.g., Someone might be designing a different storage tank and want to compare the design with a scale drawing of one they have.