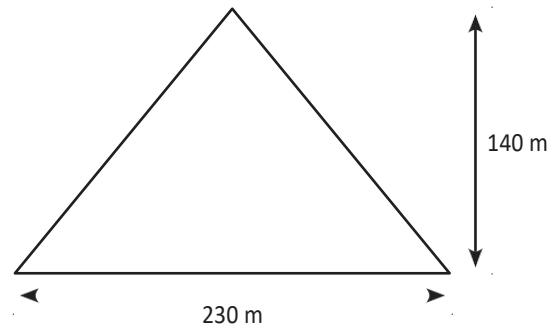


## CHAPTER 7 Practice TEST

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1. What is the length of a diagonal brace used to support a table that is 120 cm wide by 50 cm tall?

2. The Pyramid of Khufu is approximately 140 metres tall. If the base is a square with sides measuring 230 metres, what is the slant height from the centre of one of the sides of the pyramid? (Hint the slant height is the hypotenuse of a right triangle.)



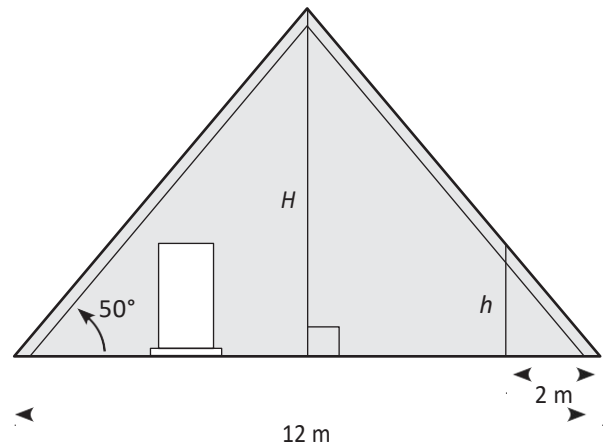
3. A plane travels 12 km along its flight path while climbing at a constant rate of  $8^\circ$ . What is the vertical change in height during this time?

4. A ramp 12 metres long makes an angle of  $15^\circ$  with the ground. What is the height of the ramp? If the ramp is doubled in length, what will the total height be?
5. A chute from an open window to the ground makes an angle of  $52^\circ$  with the side of a building. If the window is 18 metres from the ground, how long is the chute?
6. A tree casts a shadow that is 10 metres long. If the angle of elevation to the top of the tree from the ground at the end of the shadow is  $60^\circ$ , how high is the tree?

7. The angle of elevation from the bottom of one building to the top of another building is  $78^\circ$ . The angle of elevation from the bottom of the second building to the top of the first is  $62^\circ$ . If the distance between them is 150 metres, how much taller is the higher building than the shorter one?

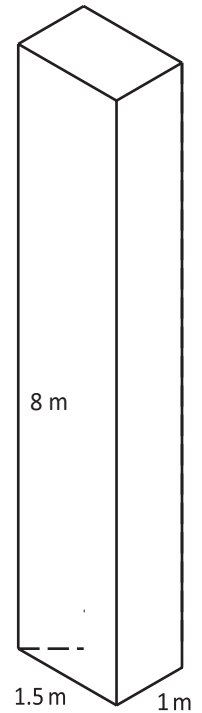
8. In an A-frame building, the angle of elevation of the roof is  $50^\circ$  and the building is 12 metres wide.

- a) How high is the building at the centre?



- b) How high is it 2 metres in from an edge?

9. A box is 1.5 m long, 1.0 m deep, and 8.0 m tall. What is the length of the longest object that can fit in the box?



10. A lifeguard sits in a chair that is 2.5 metres high. He spots a child in trouble in the water at an angle of depression of  $23^\circ$ . How far out from the chair is the child?

11. What is the angle of elevation of a playground slide that is 1.2 m high and has a horizontal length of 2.6 m?