

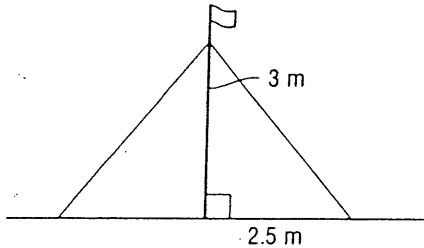
## 7.2 Using the Pythagorean Theorem

MATHPOWER™ Eight, pp. 208–209

1. A 12-m ladder is leaning against a wall. The foot of the ladder is 3 m from the base of the building. How far up the wall is the top of the ladder?

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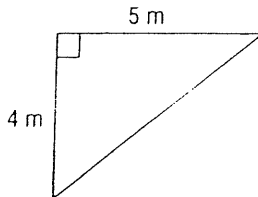
2. Wires are used to support a flagpole at the fairground.



The wires are attached 3 m from the ground and 2.5 m from the base of the pole. How long is each wire?

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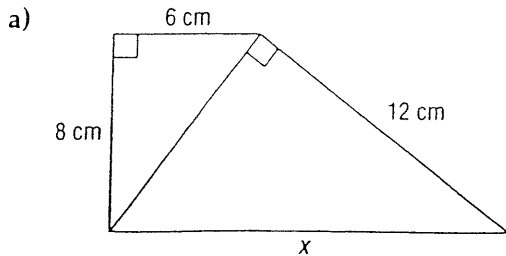
3. Jacob sectioned off a triangular area in his yard for a vegetable garden.



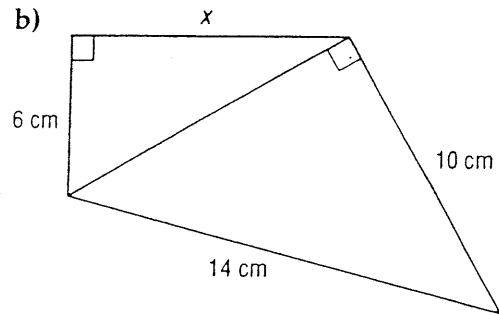
How much fence does he need, in metres, to surround the three sides of the garden?

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4. Find  $x$  to the nearest tenth of a centimetre.

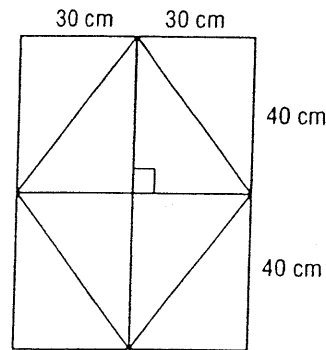


$x =$  \_\_\_\_\_

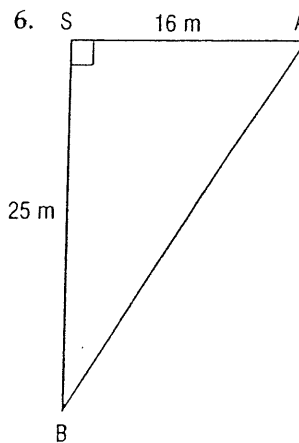


$x =$  \_\_\_\_\_

5. A decorative window has 4 diagonal bars as shown. What is the length of each one?



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A power cable runs east from the station, S, to point A, and south to point B. What is the length of the cable that runs between A and B, to the nearest tenth of a metre?

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7. The pegs on a 3-by-3 geoboard are spaced 5 cm apart. Sketch all the different right triangles that can be made on it, and calculate the length of each side, to the nearest tenth of a centimetre.

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