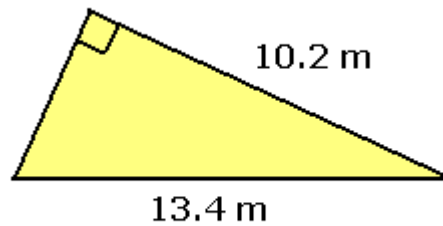


## MATC9 Ch2.2 Key Concepts 1 Perimeter of a Right Triangle Worked Example

**Example:** Find the perimeter of the triangle shown.

**Solution:** Use the Pythagorean theorem to find the length of the unknown side.

$$\begin{aligned}13.4^2 &= 10.2^2 + b^2 \\ b^2 &= 13.4^2 - 10.2^2 \\ &= 75.5 \\ b &= 8.7 \text{ m}\end{aligned}$$



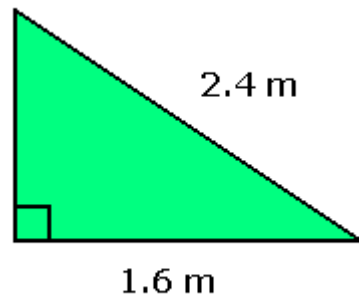
Then, add the three sides to find the perimeter.

$$\begin{aligned}P &= 13.4 + 10.2 + 8.7 \\ &= 32.3 \text{ m}\end{aligned}$$

The perimeter is 32.2 m.

### Practice:

1. Maryanne dug a flower bed in her garden as shown. Find the length of fencing needed to go around the flower bed.



2. Two roads meet at a right angle. A railroad track crosses the two roads, forming a right-angled isosceles triangle. The length of the track between the roads is 340 m. Find the perimeter of the triangle.

Answers: 1. 5.8 m 2. 820 m