



THIRD SPACE
LEARNING

Pythagorean Theorem Practice Problems

15 pythagorean theorem
practice problems for 8th
grade students

8th Grade

Questions

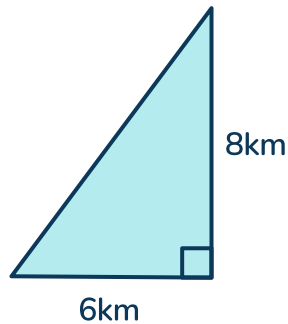
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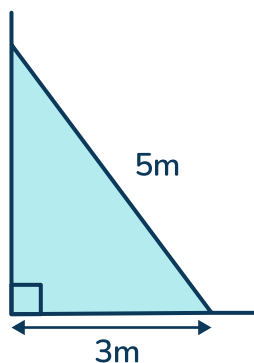
- 1 A ship sails 6km East and then 8km North. Find the ship's distance from its starting point.



- a) 14km
b) 10km
c) 5.29km
d) 2km

Answer

- 2 A ladder is 5m long. The base of the ladder is 3m from the base of a vertical wall. How far up the wall does the ladder reach?

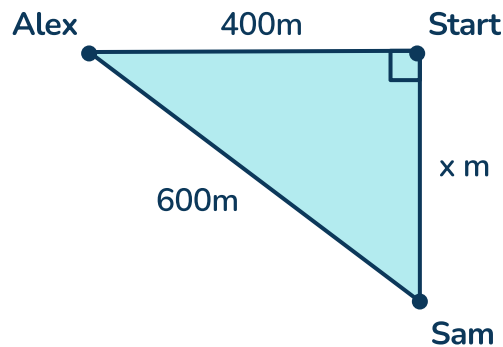


- a) 8m
b) 5.83m
c) 4m
d) 16m

Answer

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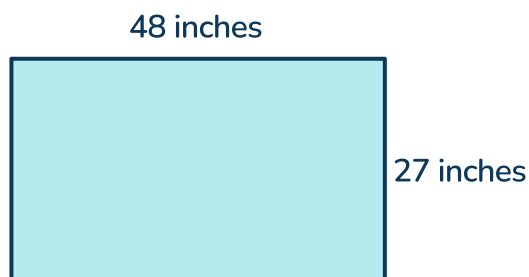
- 3 Alex and Sam start from the same point. Alex walks 400 meters west. Sam walks x meters south, until they are 600m apart from each other. How far does Sam walk?



- a) 200m
- b) 447m
- c) 721m
- d) 1000m

Answer

- 4 A television's size is the measurement from the upper left hand corner of the television to the bottom right hand corner. Find the size of this television.

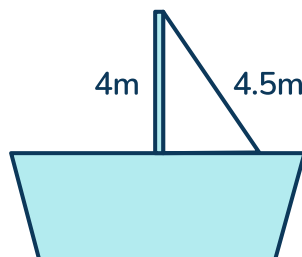


- a) 75 inches
- b) 150 inches
- c) 39.7 inches
- d) 55.1 inches

Answer

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- 5 The pole of a sailing boat is supported by a rope from the top of the pole to an anchor point on the deck. The pole is 4m long and the rope is 4.5m long. Calculate the distance from the base of the pole to the anchor point of the rope on the deck.



- a) 2.06m
- b) 6.02m
- c) 8.5m
- d) 0.5m

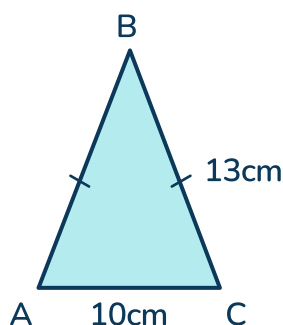
Answer

- 6 Work out the length of the diagonal of a square with sides 8cm.

- a) 11.3cm
- b) 16cm
- c) 8cm
- d) 12cm

Answer

- 7 ABC is an isosceles triangle.



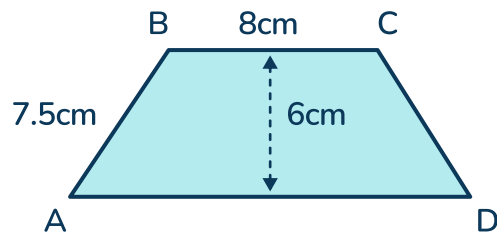
Work out the height of the triangle.

- a) 8.31cm
- b) 12cm
- c) 16.4cm
- d) 13.9cm

Answer

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- 8 ABCD is an isosceles trapezoid.

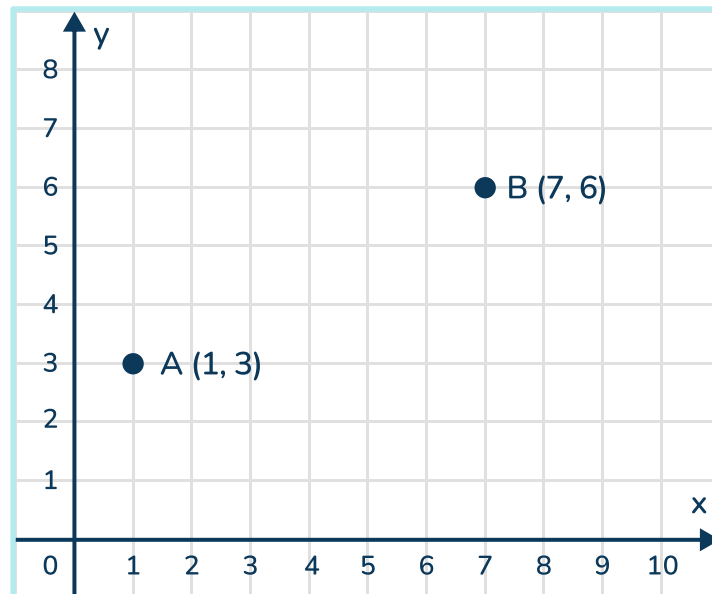


Work out the length of AD.

- a) 4.5cm
- b) 12.5cm
- c) 17cm
- d) 23cm

Answer

- 9 Here is a cm square grid. Calculate the distance between the points A and B.

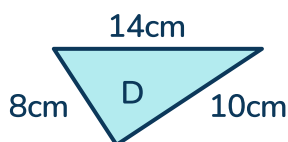
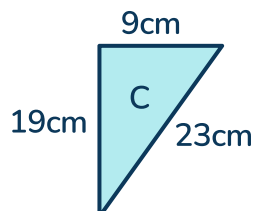
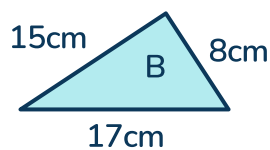
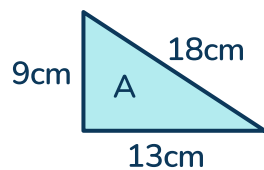


- a) 9cm
- b) 5.20cm
- c) 3cm
- d) 6.71cm

Answer

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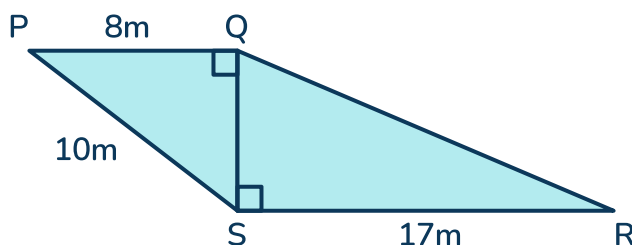
10 Which is a right triangle?



- a) A
- b) B
- c) C
- d) D

Answer

11 PQRS is made from two right triangles.

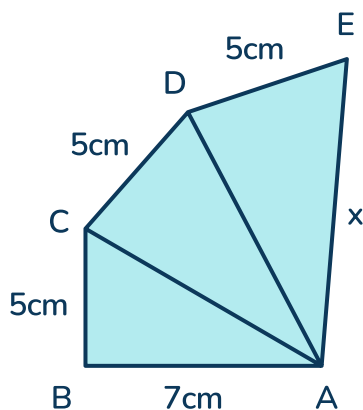


Work out the length of QR.

- a) 18.0m
- b) 6m
- c) 15.9m
- d) 21.3m

Answer

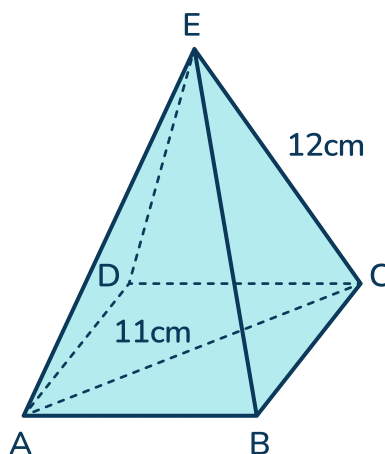
- 12 Here is a pattern made from right triangles. Work out the length x .



- a) 8.60cm
- b) 16.6cm
- c) 11.1cm
- d) 8.66cm

Answer

- 13 Here is a pyramid.

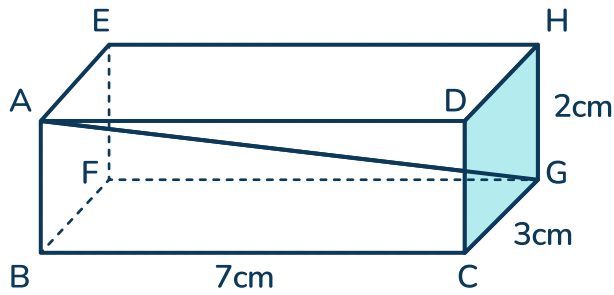


Work out the height of the pyramid.

- a) 4.80cm
- b) 16.3cm
- c) 13.2cm
- d) 10.7cm

Answer

14 Here is a cuboid.



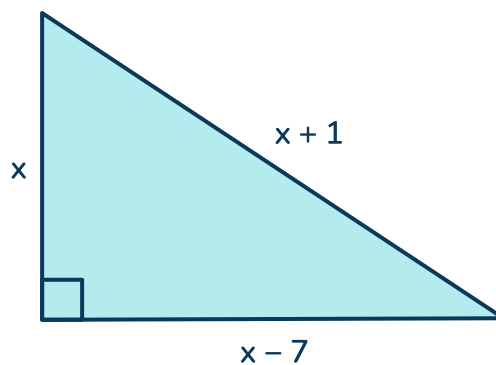
Work out the length AG.

Give your answer in its exact form.

- a) $\sqrt{58} \text{ cm}$
- b) $\sqrt{62} \text{ cm}$
- c) $\sqrt{53} \text{ cm}$
- d) $\sqrt{42} \text{ cm}$

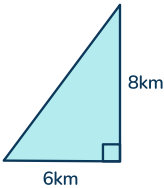
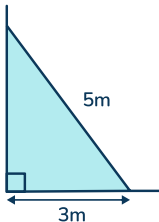
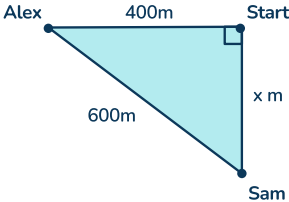
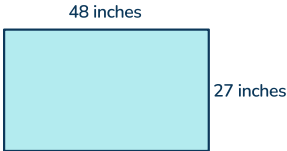
15 Here is a right triangle.

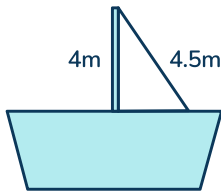
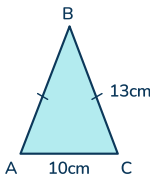
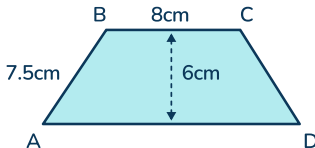
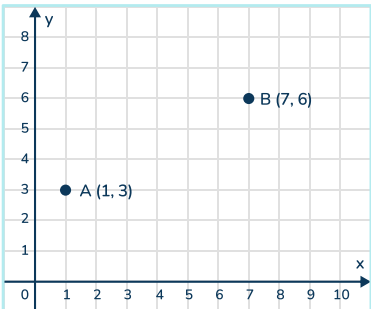
Form an equation and use it to work out the value of x .

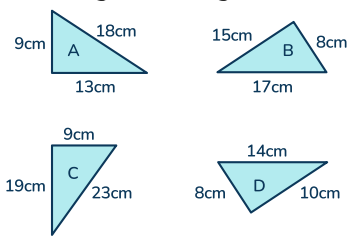
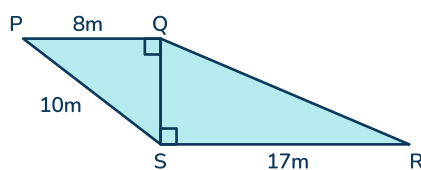
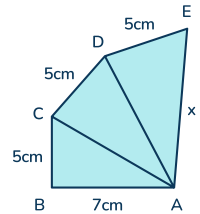
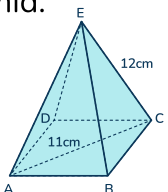
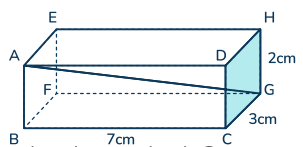
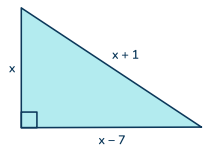


- a) 4cm
- b) 10cm
- c) 17cm
- d) 12cm

Answers

Question Number	Question	Answer
1	<p>A ship sails 6km East and then 8km North. Find the ship's distance from its starting point.</p> 	b) 10km
2	<p>A ladder is 5m long. The base of the ladder is 3m from the base of a vertical wall. How far up the wall does the ladder reach?</p> 	c) 4m
3	<p>Alex and Sam start from the same point. Alex walks 400 meters west. Sam walks x meters south, until they are 600m apart from each other. How far does Sam walk?</p> 	b) 447m
4	<p>A television's size is the measurement from the upper left hand corner of the television to the bottom right hand corner. Find the size of this television.</p> 	d) 55.1 inches

Question Number	Question	Answer
5	<p>The pole of a sailing boat is supported by a rope from the top of the pole to an anchor point on the deck. The pole is 4m long and the rope is 4.5m long. Calculate the distance from the base of the pole to the anchor point of the rope on the deck.</p> 	a) 2.06m
6	<p>Work out the length of the diagonal of a square with sides 8cm.</p>	a) 11.3cm
7	<p>ABC is an isosceles triangle.</p>  <p>Work out the height of the triangle.</p>	b) 12cm
8	<p>ABCD is an isosceles trapezoid.</p>  <p>Work out the length of AD.</p>	c) 17cm
9	<p>Here is a cm square grid. Calculate the distance between the points A and B.</p> 	d) 6.71cm

Question Number	Question	Answer
10	<p>Which is a right triangle?</p> 	b) B
11	<p>PQRS is made from two right triangles.</p>  <p>Work out the length of QR.</p>	a) 18.0m
12	<p>Here is a pattern made from right triangles. Work out the length x.</p> 	c) 11.1cm
13	<p>Here is a pyramid.</p>  <p>Work out the height of the pyramid.</p>	d) 10.7cm
14	<p>Here is a cuboid.</p>  <p>Work out the length AG. Give your answer in its exact form.</p>	b) $\sqrt{62} \text{ cm}$
15	<p>Here is a right triangle.</p>  <p>Form an equation and use it to work out the value of x.</p>	d) 12cm

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Michelle Craig, Instructional Coach,
Sherwood Forest Elementary, Washington

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