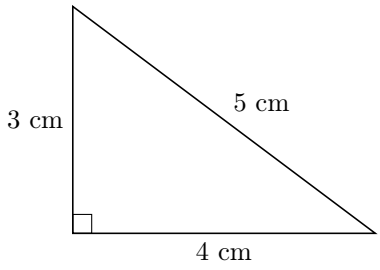
PYTHAGOREAN THEOREM

A RIGHT-ANGLED TRIANGLE

A.1 CALCULATING SQUARED SIDE LENGTHS

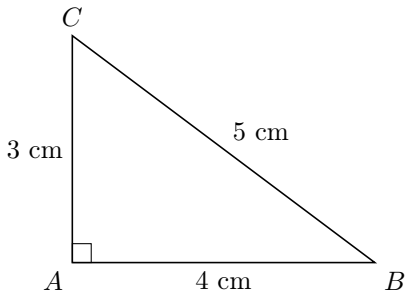
Ex 1:



Find the length of the hypotenuse.

$\square$ cm

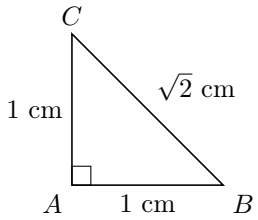
Ex 2:



Let a be the length of one leg, b the length of the other leg, and c the length of the hypotenuse. Calculate $a^2 + b^2$ and c^2.

$a^2 + b^2 = \square$ cm^2 and $c^2 = \square$ cm^2

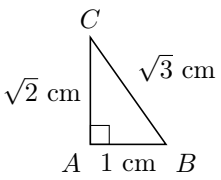
Ex 3:



Let a be the length of one leg, b the length of the other leg, and c the length of the hypotenuse. Calculate $a^2 + b^2$ and c^2.

$a^2 + b^2 = \square$ cm^2 and $c^2 = \square$ cm^2

Ex 4:



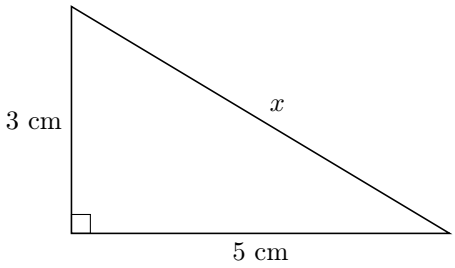
Let a be the length of one leg, b the length of the other leg, and c the length of the hypotenuse. Calculate $a^2 + b^2$ and c^2.

$a^2 + b^2 = \square$ cm^2 and $c^2 = \square$ cm^2

B PYTHAGOREAN THEOREM

B.1 FINDING THE LENGTH OF THE HYPOTENUSE

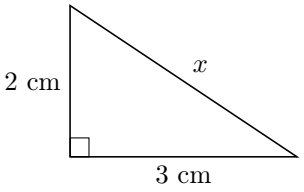
Ex 5:



Find x.

$x \approx \square$ cm (round to 1 decimal place)

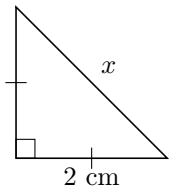
Ex 6:



Find x.

$x \approx \square$ cm (round to 1 decimal place)

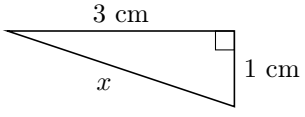
Ex 7:



Find x.

$x \approx \square$ cm (round to 1 decimal place)

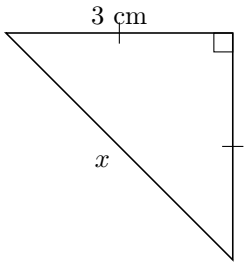
Ex 8:



Find x.

$x \approx \square$ cm (round to 1 decimal place)

Ex 9:

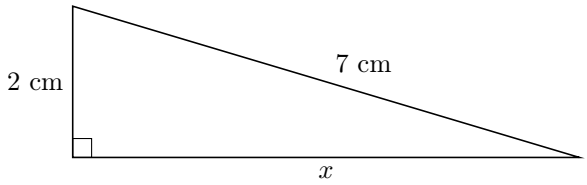


Find x.

$x \approx$ ☐ cm (round to 1 decimal place)

B.2 FINDING THE LENGTH OF A LEG

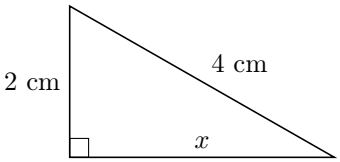
Ex 10:



Find x.

$x \approx$ ☐ cm (round to 1 decimal place)

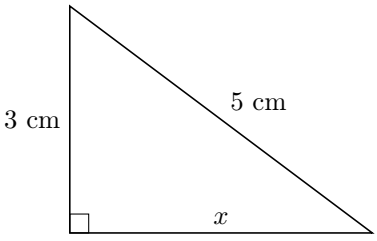
Ex 11:



Find x.

$x \approx$ ☐ cm (round to 1 decimal place)

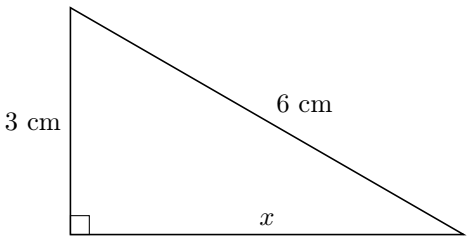
Ex 12:



Find x.

$x =$ ☐ cm

Ex 13:

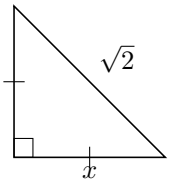


Find x.

$x \approx$ ☐ cm (round to 1 decimal place)

B.3 APPLYING THE PYTHAGOREAN THEOREM

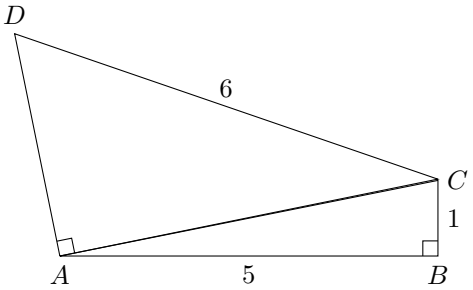
Ex 14:



Find x.

$x =$ ☐

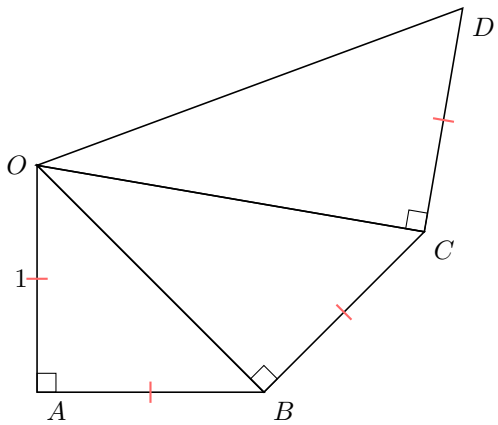
Ex 15:



Find the length of AD.

$AD \approx$ ☐ cm (round to 1 decimal place)

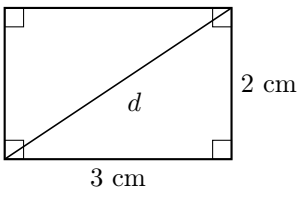
Ex 16:



Find OD.

$OD =$ ☐

Ex 17:



Find d.

$d \approx$ ☐ cm (round to 1 decimal place)

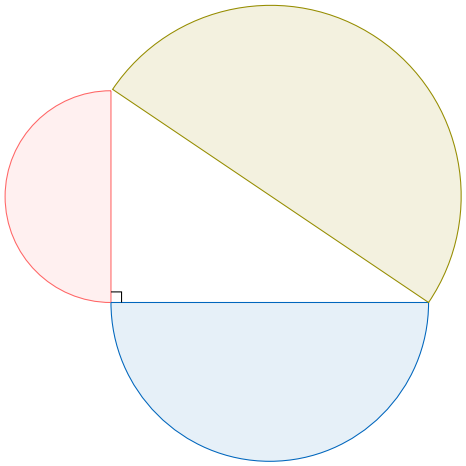
Ex 18: A square has a diagonal of length 4 cm. Find the length of the square's sides.

$x \approx$ ☐ cm (round to 1 decimal place)

Ex 19: A rhombus has diagonals of length 8 cm and 10 cm. Find the length of its sides.

$x \approx$ ☐ cm (round to 1 decimal place)

MCQ 20: State whether the sum of the areas of the blue and red half-circles equals the area of the green half-circle.



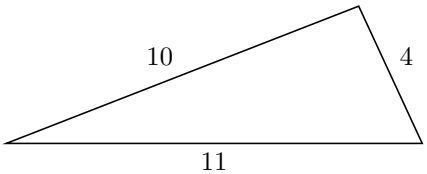
☐ True

☐ False

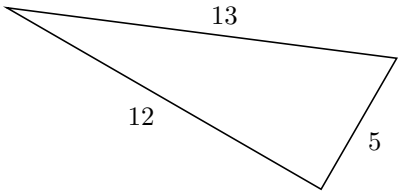
C VERIFYING RIGHT-ANGLED TRIANGLES

C.1 VERIFYING RIGHT-ANGLED TRIANGLES

Ex 21: Is this a right-angled triangle? Justify.



MCQ 22: Is this a right-angled triangle?

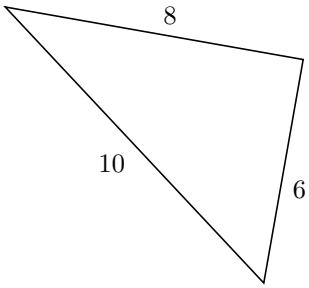


Choose one answer:

☐ True

☐ False

MCQ 23: Is this a right-angled triangle?

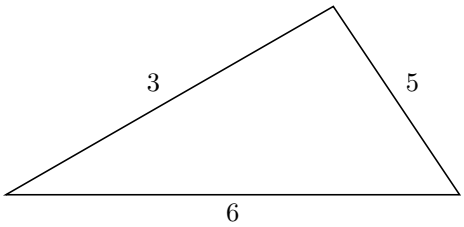


Choose one answer:

☐ True

☐ False

MCQ 24: Is this a right-angled triangle?

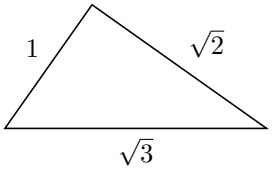


Choose one answer:

☐ True

☐ False

MCQ 25: Is this a right-angled triangle?

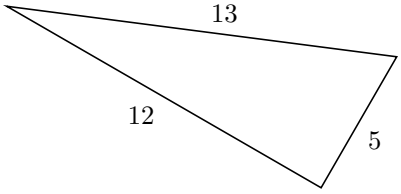


Choose one answer:

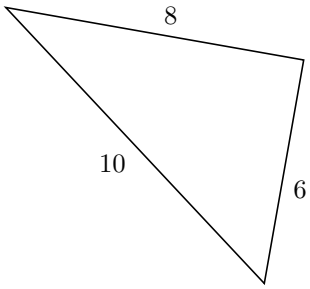
☐ True

☐ False

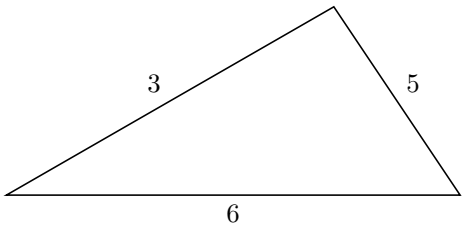
Ex 26: Is this a right-angled triangle? Justify.



Ex 27: Is this a right-angled triangle? Justify.



Ex 28: Is this a right-angled triangle? Justify.



Ex 29: Is this a right-angled triangle? Justify.