PYTHAGOREAN THEOREM
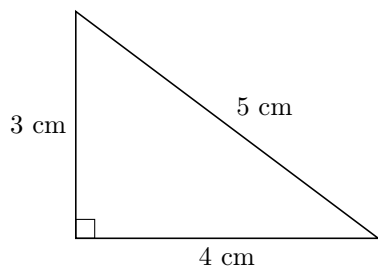
A RIGHT-ANGLED TRIANGLE

A.1 CALCULATING SQUARED SIDE LENGTHS
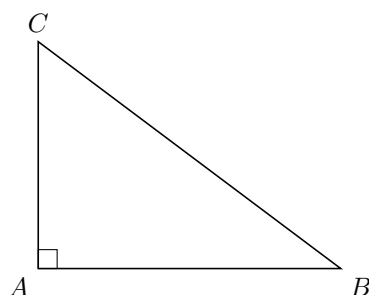
Ex 1:

Find the length of the hypotenuse.

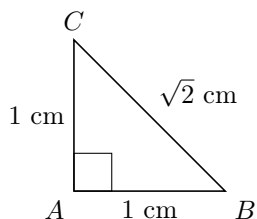$\boxed{}$ cm

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.

$a^2 + b^2 = \boxed{}$ cm² and $c^2 = \boxed{}$ cm²
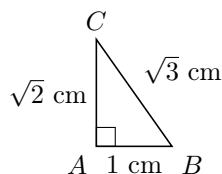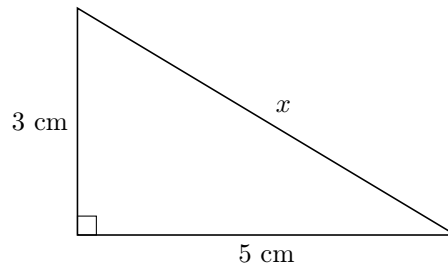
Ex 3:

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.

$a^2 + b^2 = \boxed{}$ cm² and $c^2 = \boxed{}$ cm²

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.

$a^2 + b^2 = \boxed{}$ cm² and $c^2 = \boxed{}$ cm²

B PYTHAGOREAN THEOREM

B.1 FINDING THE LENGTH OF THE HYPOTENUSE

Ex 5:

Find x.

$x \approx \boxed{}$ cm (round to 1 decimal place)

Ex 6:
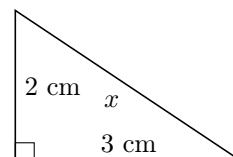
Find x.

$x \approx \boxed{}$ cm (round to 1 decimal place)

Ex 7:
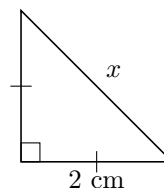
Find x.

$x \approx \boxed{}$ cm (round to 1 decimal place)

Ex 8:
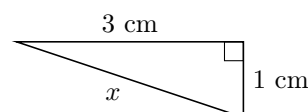
Find x.

$x \approx \boxed{}$ cm (round to 1 decimal place)

Ex 9:

3 cm

x
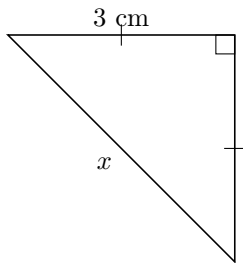
Find x.

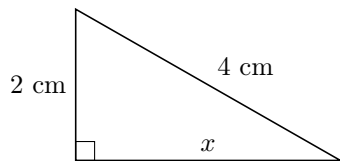$x \approx$ ⬚ cm (round to 1 decimal place)

B.2 FINDING THE LENGTH OF A LEG

Ex 10:

2 cm

7 cm

x
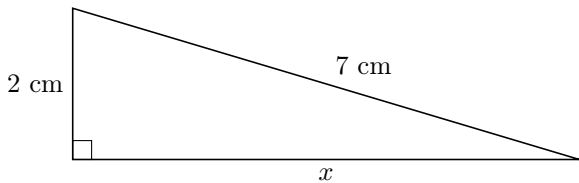
Find x.

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

Ex 11:

2 cm

4 cm

x

Find x.

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

Ex 12:
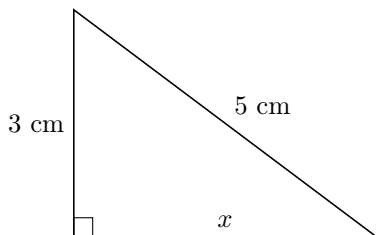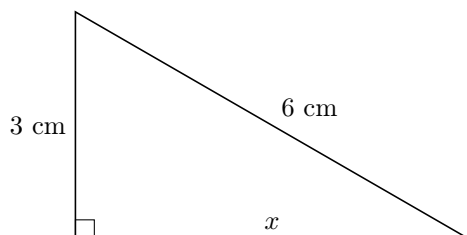
3 cm

5 cm

x

Find x.

$x =$ ⬚ cm

Ex 13:

3 cm

6 cm

x

Find x.

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

Ex 14:

$\sqrt{2}$

x

Find x.

$x =$ ⬚

Ex 15:

D

6

C

1

A 5 B
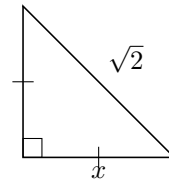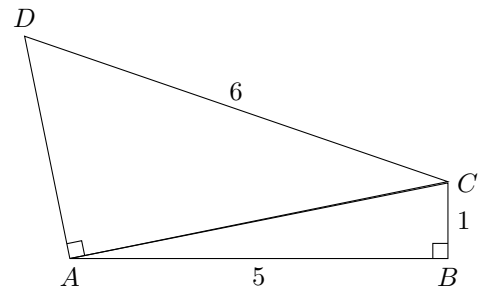
Find the length AD.

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

Ex 16:

D

O

C

1

A B

Find OD.

$OD =$ ⬚

Ex 17:

d

2 cm

3 cm
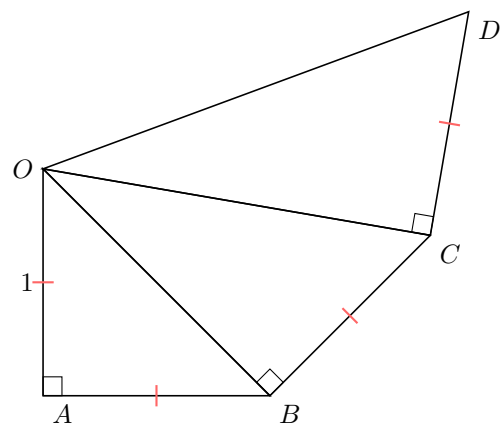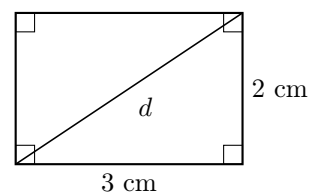
Find d.

$$d \approx \boxed{} \text{ cm (round to 1 decimal place)}$$
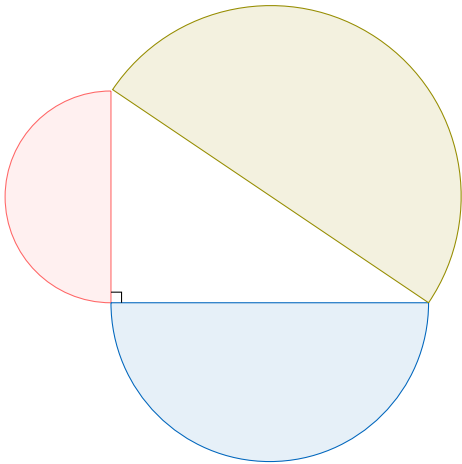
Ex 18: 🖩 A square has diagonals of length 4 cm.Find the length of the square's sides.

$$x \approx \boxed{} \text{ cm (round to 1 decimal place)}$$

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

$$x \approx \boxed{} \text{ cm (round to 1 decimal place)}$$

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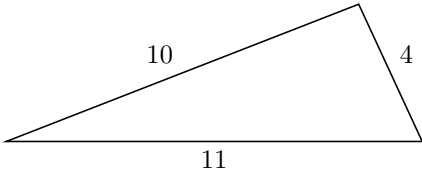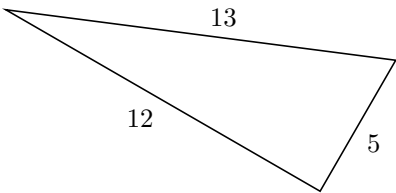

☐ True

☐ False

C VERIFYING RIGHT-ANGLED TRIANGLES

C.1 VERIFYING RIGHT-ANGLED TRIANGLES

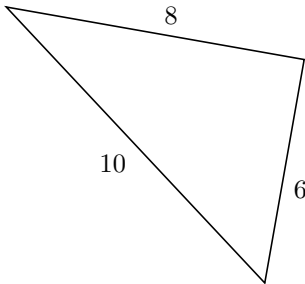**Ex 21:** Is this a right-angled triangle? Justify.
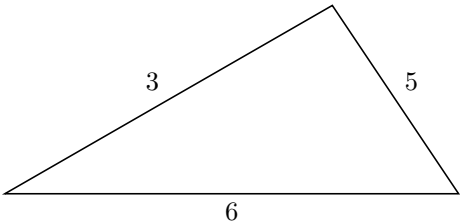

MCQ 22: Is this a right-angled triangle?

Choose one answer:

☐ True

☐ False

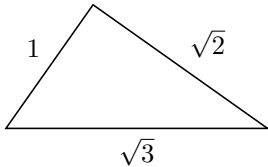**MCQ 23:** Is this a right-angled triangle?

Choose one answer:

☐ True

☐ False

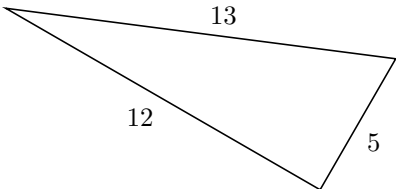**MCQ 24:** Is this a right-angled triangle?
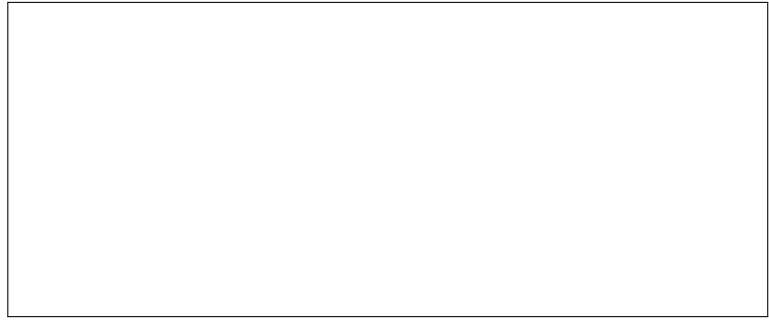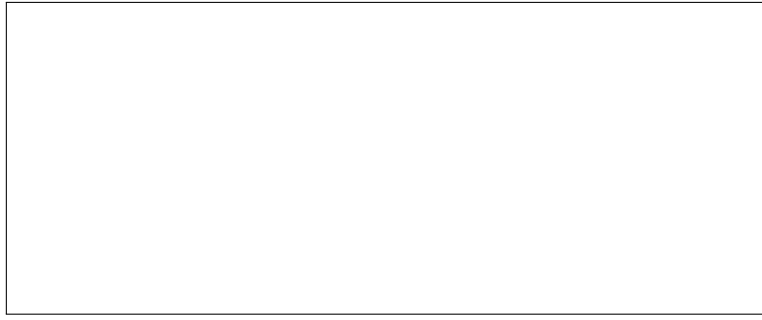

Choose one answer:

☐ True

☐ False

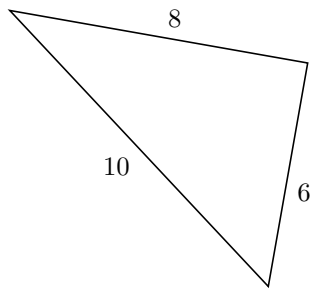**MCQ 25:** Is this a right-angled triangle?

Choose one answer:

☐ True

☐ False

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

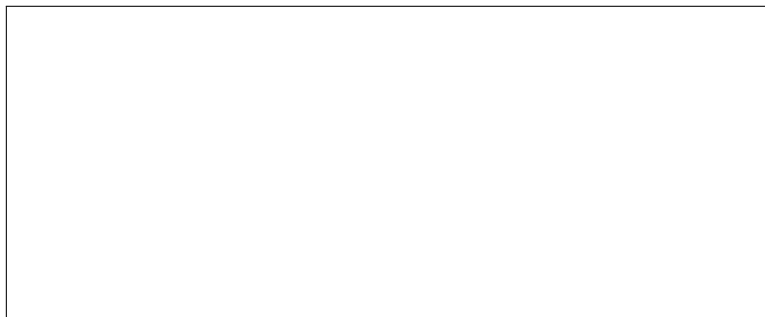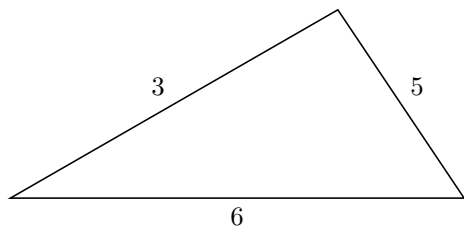**Ex 27:** Is this a right-angled triangle? Justify.

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

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