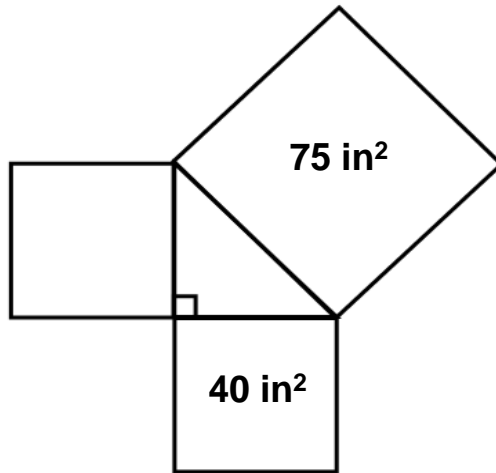


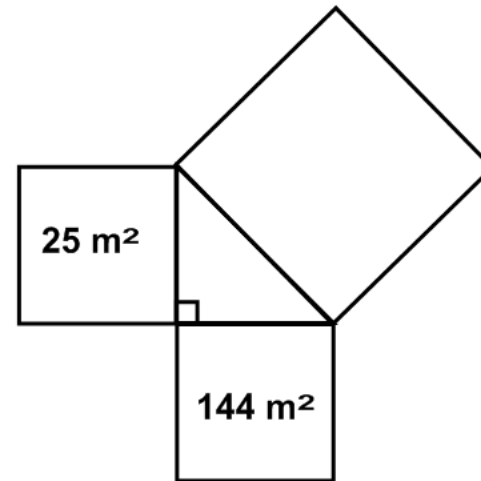
Problem 1

Find the area and side length of each missing square.
Explain.

A.



B.



Problem 1- ANSWER KEY

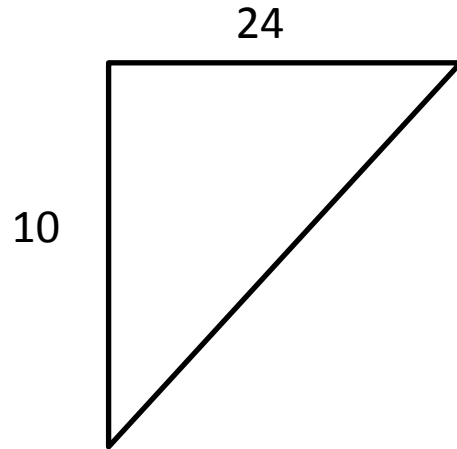
A. Area: 35
Length: $\sqrt{35}$

B. Area: 169
Length: 13

Problem 2

A traffic helicopter flies 10 miles due north and then 24 miles due east. Then the helicopter flies in a straight line back to its starting point. What was the distance of the helicopter's last leg back to its starting point?

Problem 2 – ANSWER KEY



$$C = 26 \text{ miles}$$

Problem 3

Find the distance between the two points to the nearest tenth.

A. $(4, 8)$ and $(5, 11)$

B. $(0, 7)$ and $(-5, 3)$

Problem 3 – ANSWER KEY

$$A. \quad \sqrt{10} = 3.2$$

$$B. \quad \sqrt{41} = 6.4$$

Problem 4

Pedro wants to buy triangular-shaped wings for his model airplane. The table shows the dimensions of four types of triangular-shaped model airplane wings sold by a particular hobby store.

Wing Options	Leg 1 (cm)	Leg 2 (cm)	Hypotenuse (cm)
A	9	12	16
B	7	8	9
C	5	12	13
D	15	20	25

Pedro is only considering wing options that are in the shape of a right triangle. Which option(s), if any, is Pedro considering? How do you know?

Problem 4 – ANSWER KEY

5, 12, 13 **and** 15, 20, 25

(Use the Pythagorean Theorem to test this!)

Problem 5

Estimate each distance to the nearest tenth.
Justify your answers through a number line.

A. $\sqrt{79}$

B. $\sqrt{105}$

C. $\sqrt{74}$

D. $\sqrt{52}$

E. $\sqrt{8}$

F. $\sqrt{90}$

Problem 5 – ANSWER KEY

A. $\sqrt{79} = 8.9$

B. $\sqrt{105} = 10.2$

C. $\sqrt{74} = 8.6$

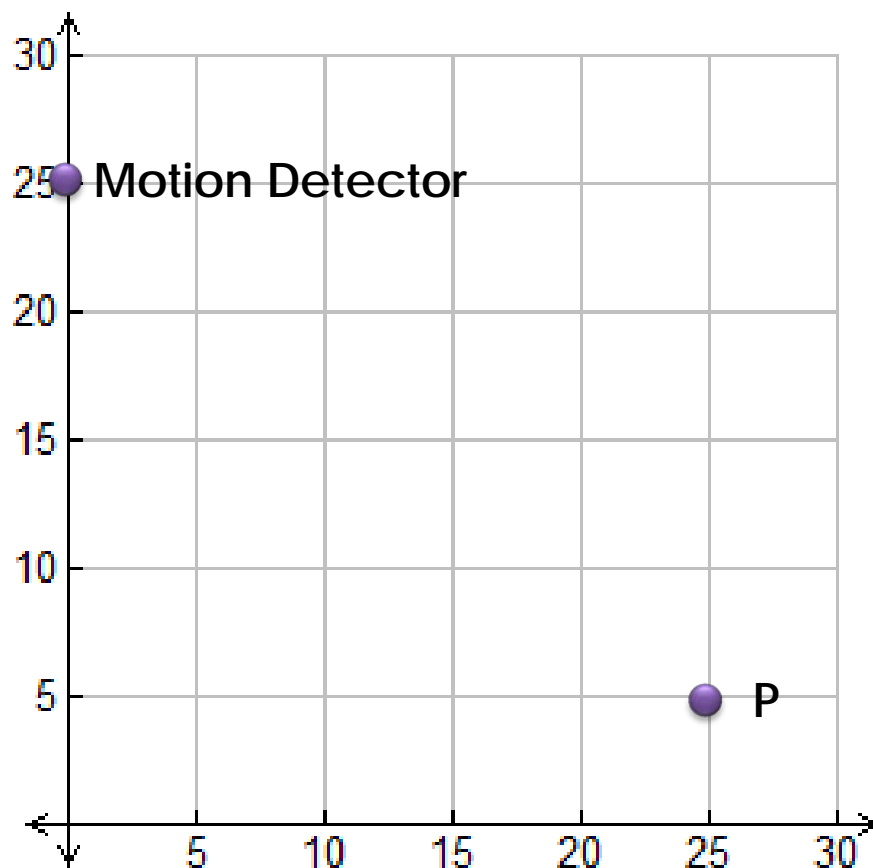
D. $\sqrt{52} = 7.2$

E. $\sqrt{8} = 2.8$

F. $\sqrt{90} = 9.5$

Problem 6

The motion detector has a maximum range of 33 feet.
Can it spot movement at P? **Explain.**

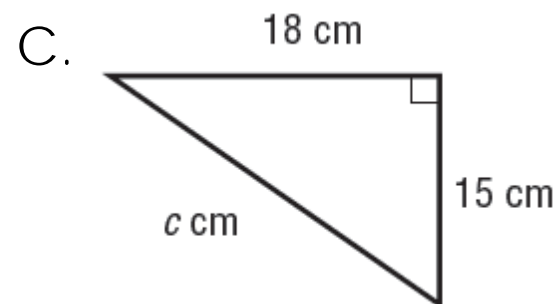
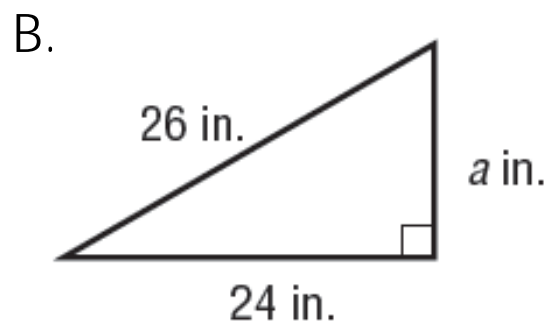
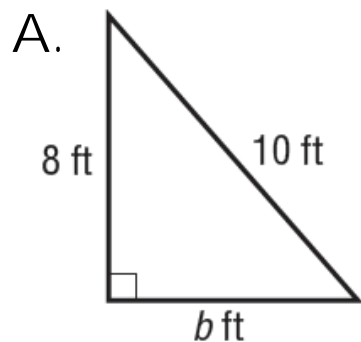


Problem 6- ANSWER KEY

Yes. The distance between P
and the Motion Detector is about 32.

Problem 7

Solve for the unknown side in each right triangle to the nearest tenth.



Problem 7- ANSWER KEY

Solve for the unknown side in each right triangle to the nearest tenth.

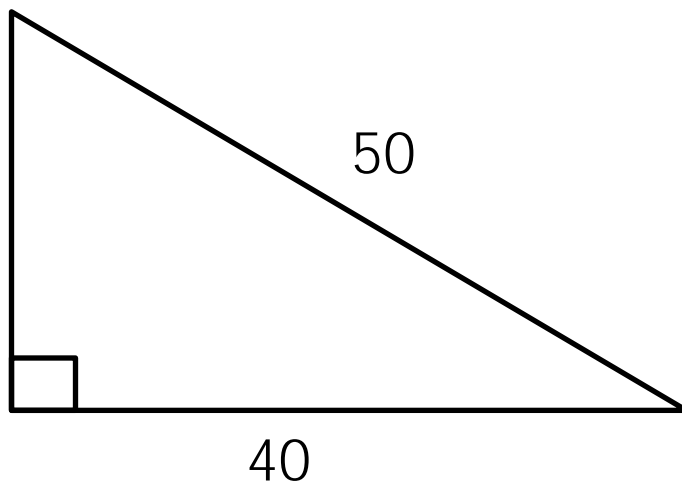
A. 6 ft

B. 10 in

C. $\sqrt{99} = 9.9$ cm

Problem 8

What is the perimeter of triangle ABC? Explain.



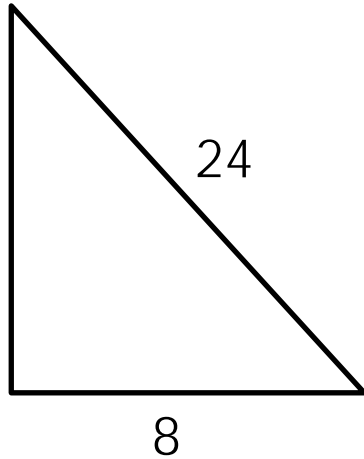
Problem 8 – ANSWER KEY

120 (It asked for PERIMETER!)

Problem 9

For safety reasons, the base of a 24-foot ladder must be placed at least 8 feet from the wall. To the nearest tenth of a foot, how high can a 24-foot ladder safely reach?

Problem 9 – ANSWER KEY



$$\sqrt{512} = 22.6$$

Problem 10

Find the distance between the two points to the nearest tenth.

A. $(3, 2)$ and $(11, 8)$

B. $(-1, -1)$ and $(-3, 6)$

Problem 10 – ANSWER KEY

A. 10

B. $\sqrt{53} = 7.3$

Problem 11

Determine whether each set is a Pythagorean Triple
(given side lengths form a right triangle).
You must show your work!

A. 3, 6, 9

B. 5, 12, 13

C. 10, 24, 26

D. 8, 14, 16

Problem 11 – ANSWER KEY

A. No

B. Yes

C. Yes

D. No

Problem 12

Estimate each distance to the nearest tenth.
Justify your answers through a number line.

A. $\sqrt{79}$

B. $\sqrt{48}$

C. $\sqrt{5}$

D. $\sqrt{30}$

E. $\sqrt{129}$

F. $\sqrt{21}$

Problem 12- ANSWER KEY

A. $\sqrt{79} = 8.9$

B. $\sqrt{48} = 6.9$

C. $\sqrt{5} = 2.2$

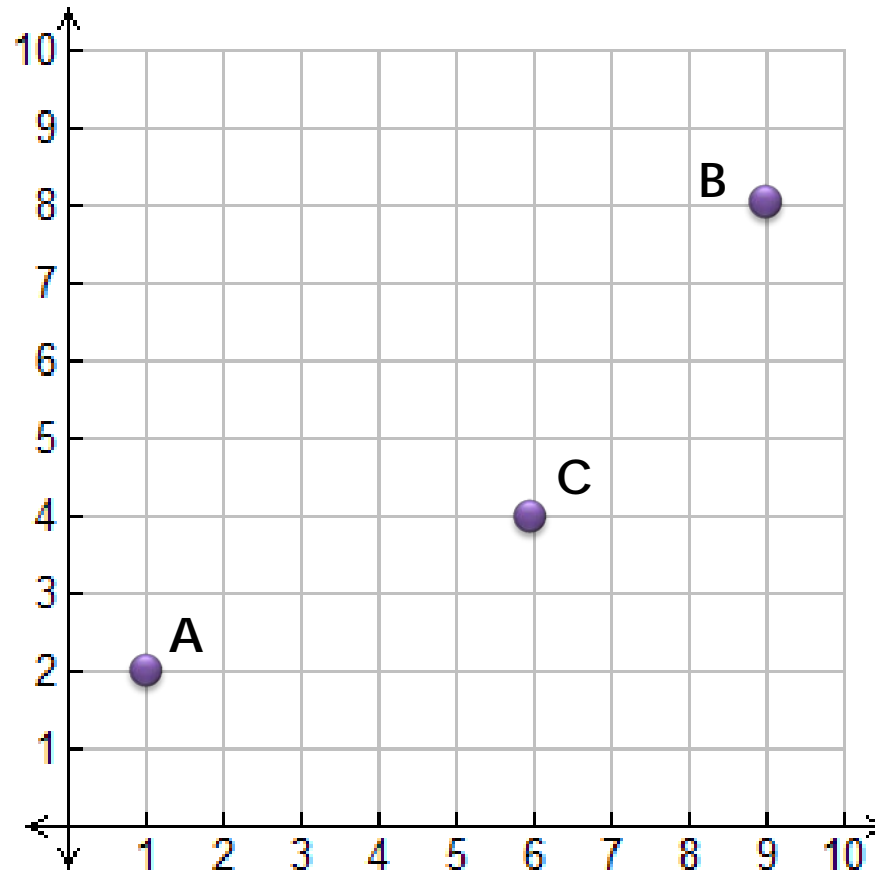
D. $\sqrt{30} = 5.5$

E. $\sqrt{129} = 11.4$

F. $\sqrt{21} = 4.6$

Problem 13

Find the distance between the points to the nearest tenth.



1. A and C

2. B and C

3. A and B

Problem 13- ANSWER KEY

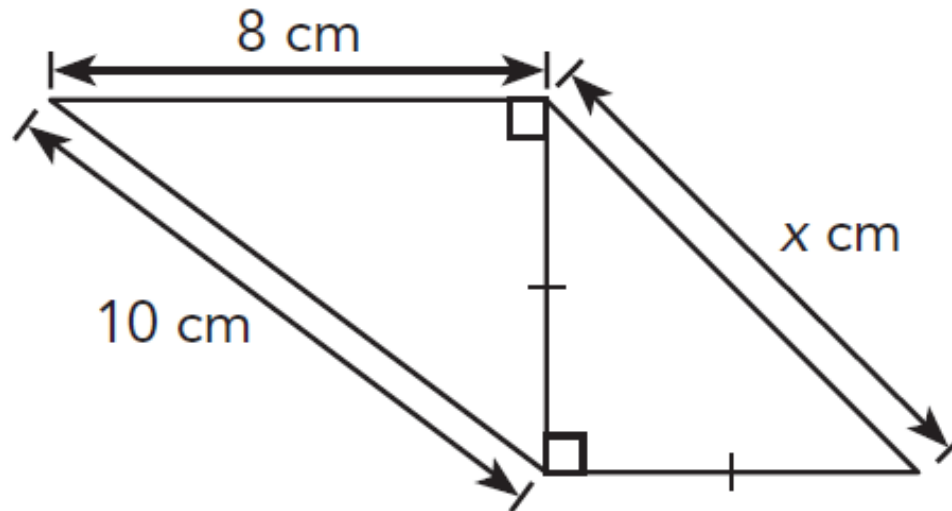
1. $\sqrt{29} = 5.4$

2. 5

3. 10

Problem 14

Solve for the unknown side in each right triangle to the nearest tenth.



Problem 14- ANSWER KEY

$$\sqrt{72} = 8.5$$