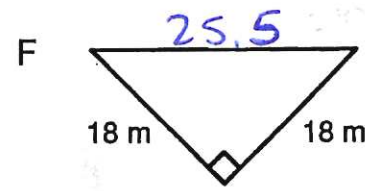
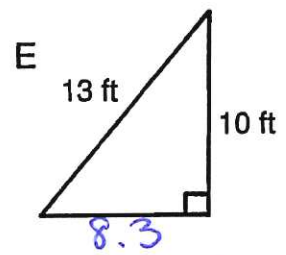
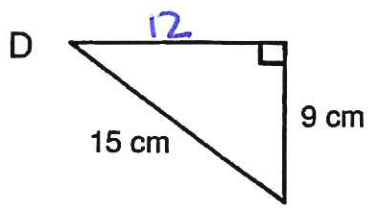
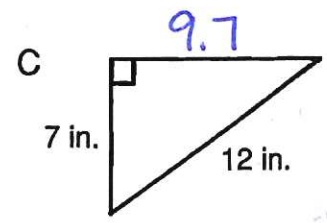
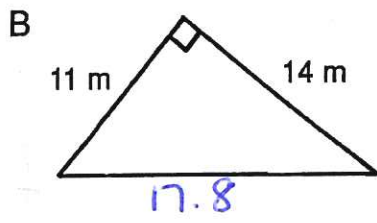
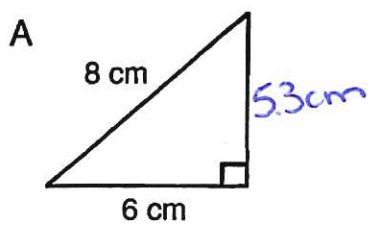


Name: _____

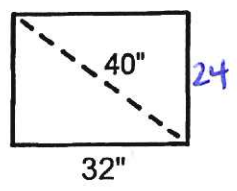
What Relation Is a Doorstep to a Doormat?

Round each answer to the nearest tenth (if necessary). Cross out the box containing each answer. When you finish, write the letters from the remaining boxes in the spaces at the bottom of the page.

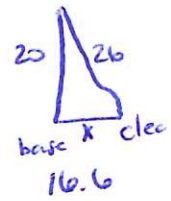
① For each right triangle, find the length of the side that is not given.



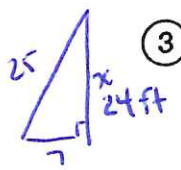
② Yuki just bought a big-screen TV set. The screen has a diagonal measure of 40 in. If the screen is 32 in. wide, how high is it?



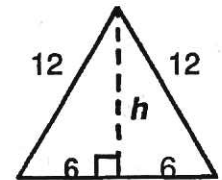
⑤ The mast of a sailing ship is 20 ft tall. A rope is stretched 26 ft from the top of the mast to a cleat on the deck of the ship. How far is the cleat from the base of the mast?



③ A 25-foot ladder is leaned against a wall. If the base of the ladder is 7 ft from the wall, how high up the wall will the ladder reach?

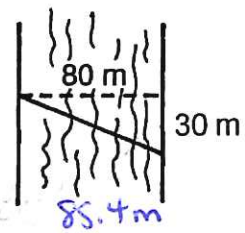


⑥ Each side of an equilateral triangle measures 12 cm. Find the height, h , of the triangle.

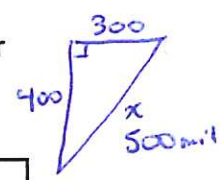


$h = 10.4$ cm

④ Across an 80-meter river, the current carried him 30 m downstream. How far did he swim?



⑦ Two jets left an airport at the same time. One traveled east at 300 miles per hour. The other traveled south at 400 miles per hour. How far apart were the jets at the end of an hour?



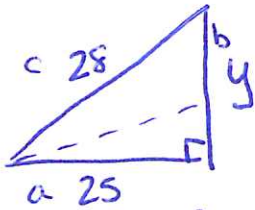
PL 85.4 m	DO 12 cm	AS 9.8 cm	OR 24 in.	MA 500 mi	TE 26 in.	AM 5.3 cm	RU 10.4 cm	PF 520 mi
ON 25.5 in.	AR 9.4 in.	UN 17.8 m	PA 16.6 ft	TH 87.1 m	IN 9.7 in.	AT 24 ft	ER 18.5 ft	AN 8.3 ft

A S T E P F A R T H E R

2-step problems

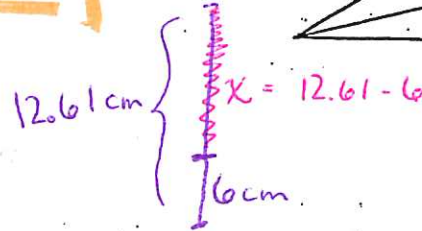
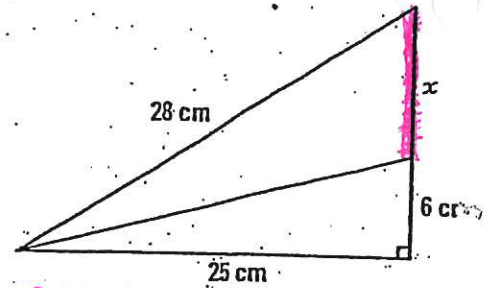
(Key)

1. Determine the value of x in the following figure.



$$x = 12.61 - 6$$

$$x = 6.61 \text{ cm}$$



$$b^2 = c^2 - a^2$$

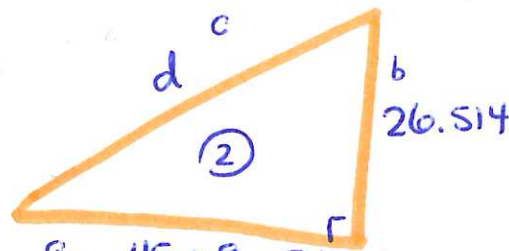
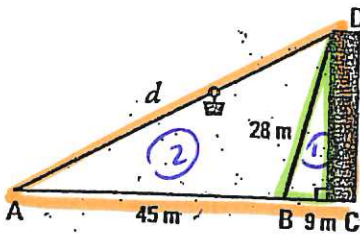
$$y^2 = 28^2 - 25^2$$

$$y^2 = 784 - 625$$

$$y^2 = 159$$

$$y = 12.6095 \text{ or } 12.61$$

2. Calculate the length d of the cable represented in the following figure.



$$a = 45 + 9 = 54 \text{ m}$$

$$a^2 + b^2 = c^2$$

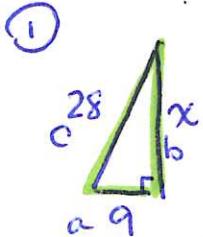
$$54^2 + 26.514^2 = d^2$$

$$2916 + 703 = d^2$$

$$\sqrt{3619} = \sqrt{d^2}$$

$$60.158 = d$$

$$d = 60.158 \text{ m}$$



$$b^2 = c^2 - a^2$$

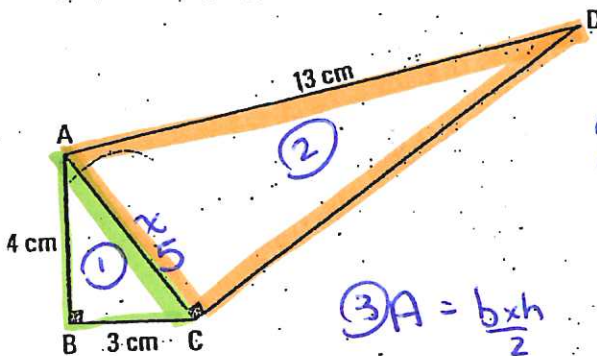
$$x^2 = 28^2 - 9^2$$

$$x^2 = 784 - 81$$

$$\sqrt{x^2} = \sqrt{703}$$

$$x = 26.514 \text{ m}$$

3. Calculate the area of triangle ACD represented in the following figure.



$$c^2 = a^2 + b^2$$

$$x^2 = 4^2 + 3^2$$

$$x^2 = 16 + 9$$

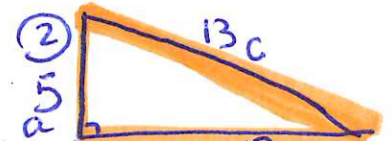
$$x^2 = 25$$

$$x = 5 \text{ cm}$$

$$A = \frac{b \times h}{2}$$

$$A = \frac{12 \times 5}{2}$$

$$A = 30 \text{ cm}^2$$



$$b^2 = c^2 - a^2$$

$$y^2 = 13^2 - 5^2$$

$$y^2 = 169 - 25$$

$$\sqrt{y^2} = \sqrt{144}$$

$$y = 12 \text{ cm}$$