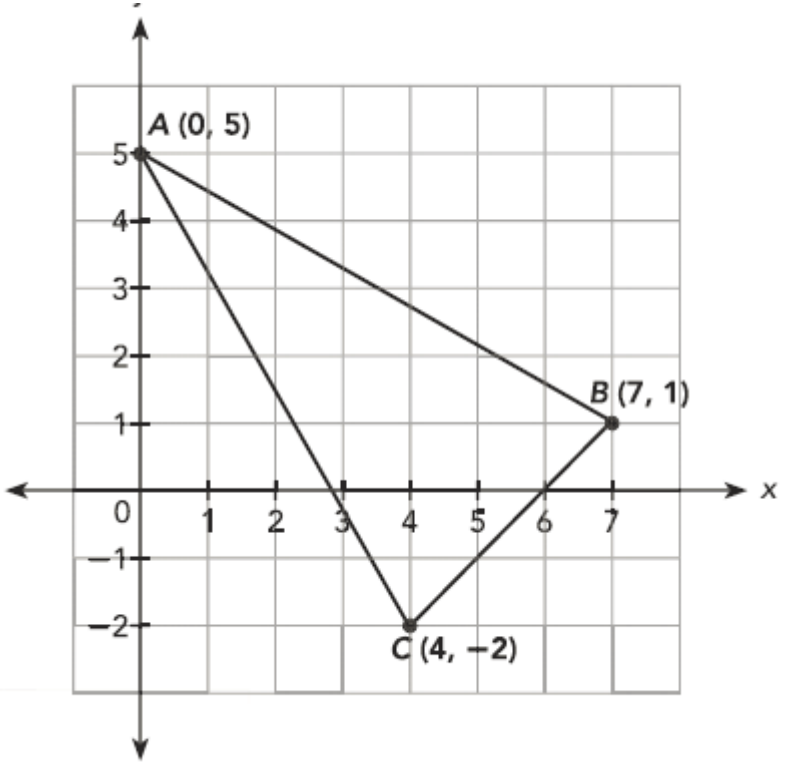
Week 1 Monday Course 3 Warm-up

Solve the system of linear equations using the elimination method or substitution method.

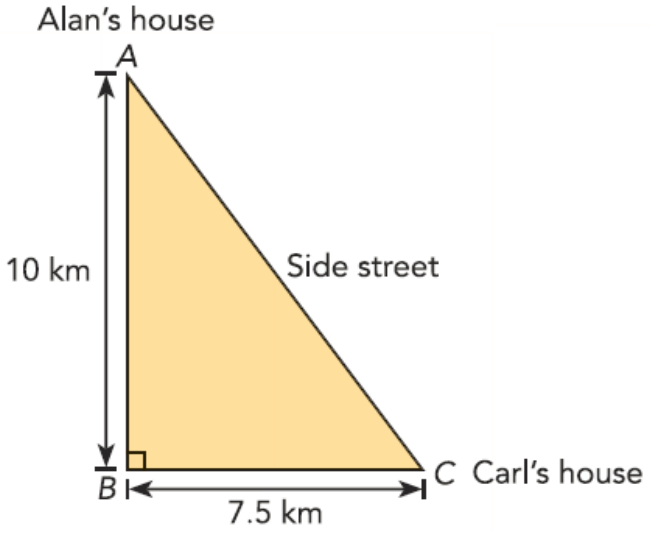
$$x + 2y = 4$$
$$x - y = 1$$

Finding Distance

Find the distance from A to B



Alan can ride his bike on two highways to get from his house to his friend Carl's house. He can also ride his bike on a side street between the two houses. How far does he bike if he takes the side street?



Week 1 Monday Course 3 Warm-up

Solve the system of linear equations using the elimination method or substitution method.

$$x + 2y = 4$$
$$x - y = 1$$

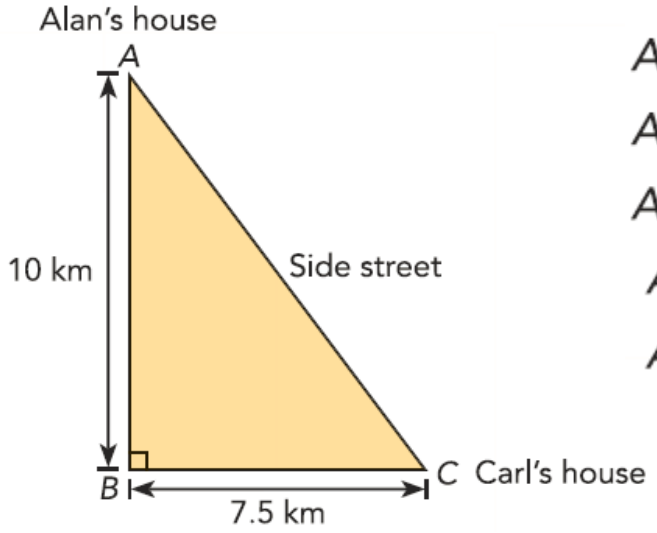
$x = 2, y = 1$

Finding Distance
Find the distance from A to B

Let A (0, 5) be (x_1, y_1) and B (7, 1) be (x_2, y_2).

$$\text{Distance from } A \text{ to } B = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$
$$= \sqrt{(7 - 0)^2 + (1 - 5)^2}$$
$$= \sqrt{7^2 + (-4)^2}$$
$$= \sqrt{65} \text{ units}$$

Alan can ride his bike on two highways to get from his house to his friend Carl's house. He can also ride his bike on a side street between the two houses. How far does he bike if he takes the side street?



$$AC^2 = AB^2 + BC^2$$
$$AC^2 = 10^2 + 7.5^2$$
$$AC^2 = 100 + 56.25$$
$$AC^2 = 156.25$$
$$AC = \sqrt{156.25}$$
$$AC = 12.5 \text{ km}$$

Week 1 Tuesday Course 3 Warm-up

Select all the expressions that are equivalent to -7.

- [ ] $-\frac{14}{2} \times \frac{7}{7}$
- [ ] $7 \times -1 \times -1 \times -1$
- [ ] $-4 \times \frac{7}{4}$
- [ ] -7×-1
- [ ] 7^{-1}

Week 1 Tuesday Course 3 Warm-up

Select all the expressions that are equivalent to -7

- [ ] $-\frac{14}{2} \times \frac{7}{7}$
- [ ] $7 \times -1 \times -1 \times -1$
- [ ] $-4 \times \frac{7}{4}$
- [ ] -7×-1
- [ ] 7^{-1}

Week 1 Wednesday Course 3 Warm-up

A system of equations is given.

$7x + 2y = 25$
$2x + 2y = 10$

What are the values of x and y in the solution to the system?

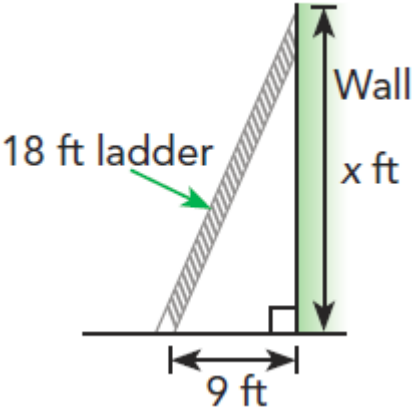
$x =$ ____

$y =$ ____

Simplify Expression

$$\left[\left(\frac{2}{3}\right)^{2} \cdot \left(\frac{2}{3}\right)^{-1}\right]^{3}$$

A ladder 18 feet long is leaning against a wall. The base of the ladder is 9 feet away from the wall. Find the distance from the top of the ladder to the ground.



Week 1 Wednesday Course 3 Warm-up

A system of equations is given.

$7x + 2y = 25$
$2x + 2y = 10$

What are the values of x and y in the solution to the system?

X=3

Y=2

$x =$

$y =$

Simplify Expression

$$\left[\left(\frac{2}{3}\right)^{2} \cdot \left(\frac{2}{3}\right)^{-1}\right]^{3} = \left[\left(\frac{2}{3}\right)^{2-1}\right]^{3}$$

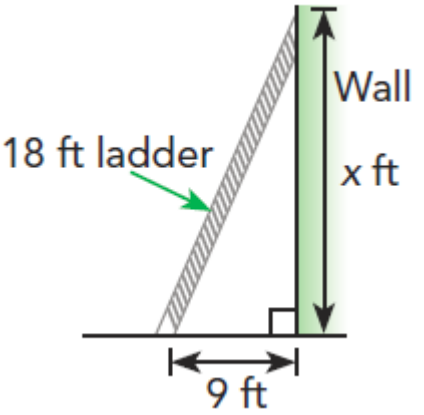
$$= \left[\left(\frac{2}{3}\right)^{1}\right]^{3}$$

$$= \left(\frac{2}{3}\right)^{1 \cdot 3}$$

$$= \left(\frac{2}{3}\right)^{3}$$

A ladder 18 feet long is leaning against a wall. The base of the ladder is 9 feet away from the wall. Find the distance from the top of the ladder to the ground.

15.6

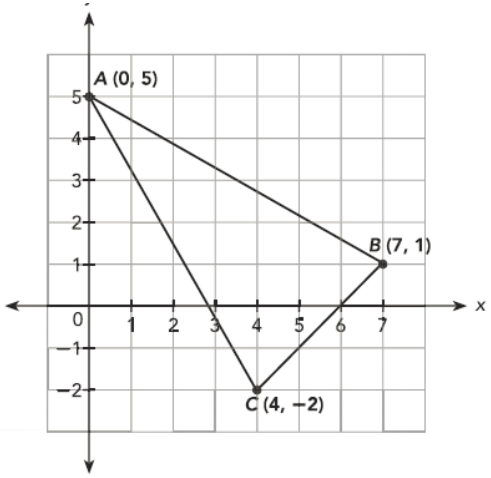


Week 1 Thursday Course 3 Warm-up

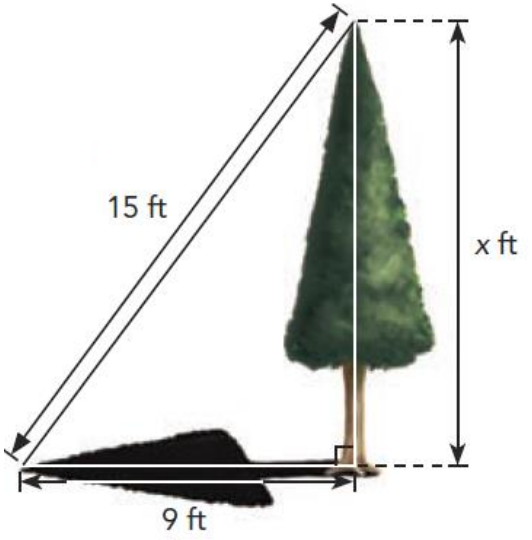
Seventy concert tickets were sold for $550. Each adult ticket cost $9 and each children's ticket cost $5. Find the number of adult tickets and the number of children's tickets sold.

Finding Distance
Find the distance from A to C

Let $A\ (0, 5)$ be (x_1, y_1) and $C\ (4, -2)$ be (x_2, y_2).



A tree has a shadow length of approximately 9 feet. The distance from the tip of the tree to the tip of the shadow is about 15 feet. How tall is the tree?



Week 1 Thursday Course 3 Warm-up

Seventy concert tickets were sold for $550. Each adult ticket cost $9 and each children's ticket cost $5. Find the number of adult tickets and the number of children's tickets sold. Adult tickets: 50; Children's tickets: 20

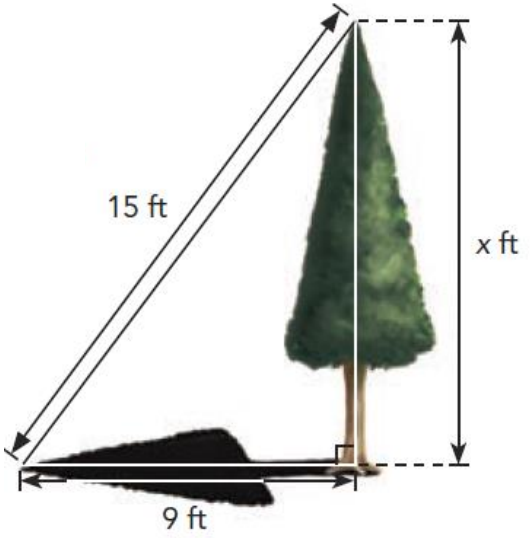
Finding Distance
Find the distance from A to C

Let $A\ (0, 5)$ be (x_1, y_1) and $C\ (4, -2)$ be (x_2, y_2).

$$\text{Distance from } A \text{ to } C = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$
$$= \sqrt{(4 - 0)^2 + [(-2) - 5]^2}$$
$$= \sqrt{4^2 + (-7)^2}$$
$$= \sqrt{65} \text{ units}$$

A tree has a shadow length of approximately 9 feet. The distance from the tip of the tree to the tip of the shadow is about 15 feet. How tall is the tree?

12



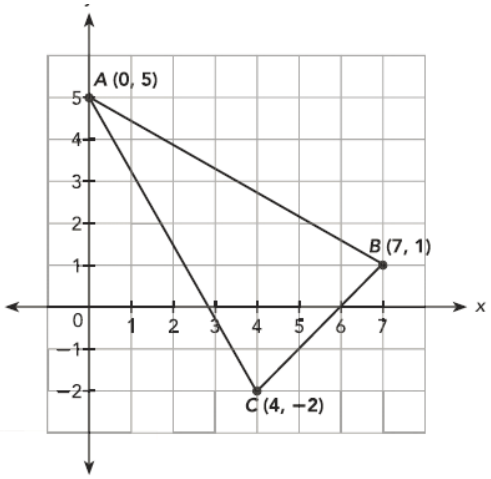
Week 1 Friday Course 3 Warm-up

George paid $2.75 for 4 granola bars and 1 apple. Addison paid $2.25 for 2 granola bars and 3 apples. Find the cost of each granola bar and each apple.

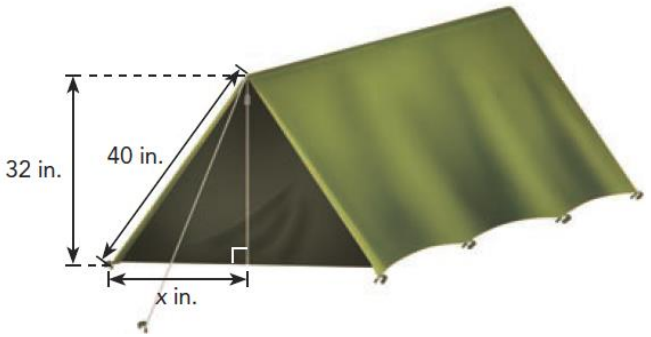
Finding Distance

Find the distance from B to C

Let $B\ (7, 1)$ be (x_1, y_1) and $C\ (4, -2)$ be (x_2, y_2)



The support pole of the tent shown forms one leg of a right triangle. One side of the tent forms the hypotenuse of the right triangle. Find the length of the base of the tent.



Week 1 Friday Course 3 Warm-up

George paid $2.75 for 4 granola bars and 1 apple. Addison paid $2.25 for 2 granola bars and 3 apples. Find the cost of each granola bar and each apple.

Granola bar: $0.60; Apple: $0.35

Distance Formula

Let B (7, 1) be (x_1, y_1) and C (4, −2) be (x_2, y_2)

$$\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

$$\sqrt{(4 - 7)^2 + [(-2) - 1]^2}$$

$$\sqrt{(-3)^2 + (-3)^2}$$

$$\sqrt{9 + 9}$$

$$\sqrt{18} \text{ units}$$

The support pole of the tent shown forms one leg of a right triangle. One side of the tent forms the hypotenuse of the right triangle. Find the length of the base of the tent.

The length of half the base of the tent is 24

So, the length of the base of the tent is 48