

Bell Ringer

Tuesday 10/22

In a canoe race, Team A is traveling 6 miles per hour and is 2 miles ahead of Team B. Team B is also traveling 6 miles per hour. The teams continue traveling at their current rates for the remainder of the race.

1. Write a system of linear equations that represents this situation.

$$A: y = 6x + 2$$

$$B: y = 6x$$

x: hrs
y: miles

2. Will Team B catch up to Team A? Explain.

No, same rate - A is already ahead //

Consider the system of linear equations $y = ax + 4$ and $y = bx - 2$, where a and b are real numbers. Determine whether each statement is always, sometimes, or never true

- a. The system has infinitely many solutions.

never - different y-int.

- b. The system has no solution.

sometimes, when $a = b$

- c. When $a < b$, the system has one solution.

Always - dif slopes

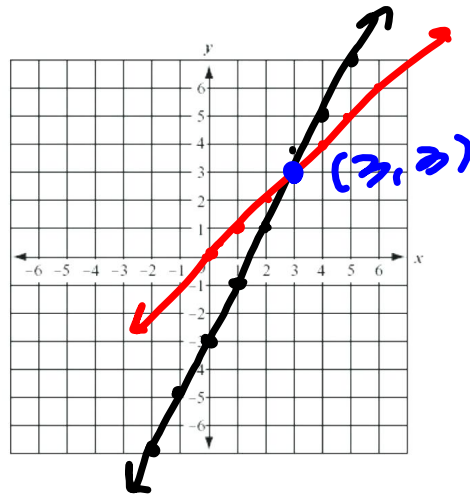
Week #9 Packet due!

5.3 Day 2 online hw due!

Quiz!!!

Solve by graphing

$$3 = 2(3) - 3 \checkmark$$
$$y = 2x - 3$$
$$3 = 3 \checkmark$$



Solve by substitution

$$-6x + 4y = -18$$

$$y - x = -2 + x$$

$$y = -2 + x$$

$$(5, 3)$$

$$-6x + 4(-2 + x) = -18$$

$$\frac{-6x}{+8} - \frac{8}{+8} + \frac{4x}{+8} = \frac{-18}{+8}$$

$$\frac{-2x}{-2} = \frac{-10}{-2}$$

$$x = 5$$

Solve by elimination

$$5x - 9y = 7$$

$$-5x - y = 23$$

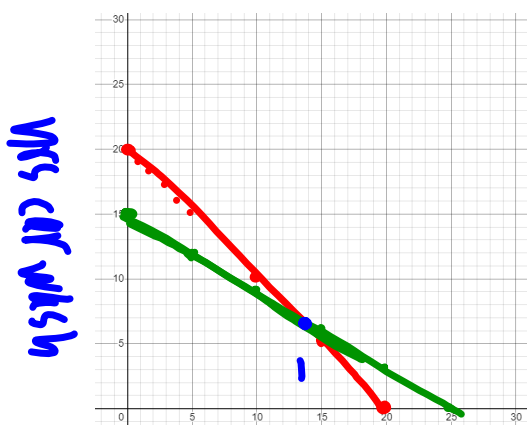
$$\begin{array}{r} 5x - 9y = 7 \\ -5x - y = 23 \\ \hline -10y = 30 \\ \frac{-10y}{-10} = \frac{30}{-10} \\ y = -3 \end{array}$$

$$(-4, -3)$$

$$-5x - \cancel{(-3)} = 23$$

$$\begin{array}{r} -5x = 20 \\ \frac{-5x}{-5} = \frac{20}{-5} \end{array}$$

Bobbi can work 20 hours next week. She needs to earn \$150. Her dog-walking job pays \$6/hr and her car wash attendant job pays \$10/hr. How many hours does she need to work of each job to earn \$150?



x: hrs dog walking y: hrs car wash

$$\begin{aligned} x + y &= 20 & -x & & y &= -x + 20 \\ 6x + 10y &= 150 & -6x & & & \\ \hline & & & & 10y &= -x + 20 \\ & & & & y &= -\frac{1}{10}x + 2 \end{aligned}$$

(14, 6) hrs dog
 (12.5, 7.5)
 y = 7.5

$$\begin{aligned} -6(x + y &= 20) \\ 6x + 10y &= 150 \\ \hline -6x - 6y &= -120 \\ \hline 4y &= 30 \\ y &= \frac{30}{4} \end{aligned}$$

Set up the problem

Tickets to a carnival are \$5 for adults and \$3 for children. If 215 people attended and receipts were \$925, how many of each type of ticket were sold?

x : # adult

y : # kid

$$5x + 3y = 925$$

$$x + y = 215$$

Quiz on 5.1-5.4

NO PHONES :)

When finished:

Double check answers

Turn in the basket

Finish missing hw

Read