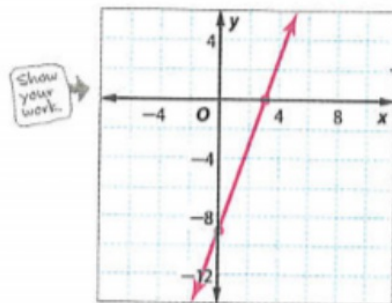


Guided Practice

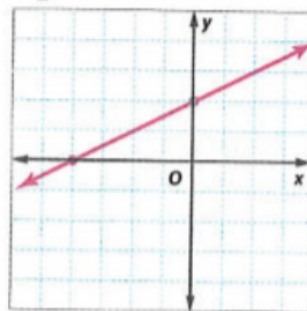


State the x - and y -intercepts of each equation. Then use the intercepts to graph the equation. (Example 1)

1. $y = 3x - 9$ x -intercept: 3; y -intercept: -9

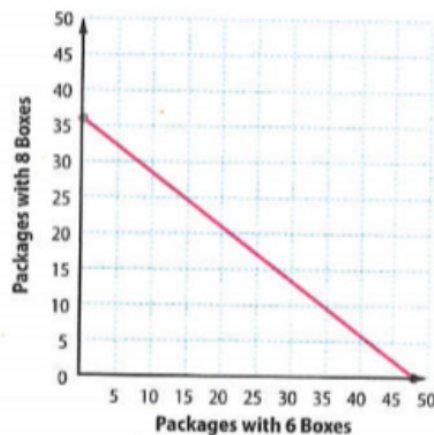


2. $y = \frac{1}{2}x + 2$ x -intercept: -4 ; y -intercept: 2



3. A store sells juice boxes in packages of 6 boxes and 8 boxes. They have 288 total juice boxes. This is represented by the function $6x + 8y = 288$. Use the x - and y -intercepts to graph the equation. Then interpret the x - and y -intercepts. (Examples 2 and 3)

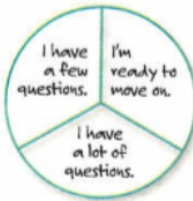
The x -intercept of 48 means that the store has 48 packages of 6 boxes and 0 packages of 8 boxes.
The y -intercept of 36 means that the store has 36 packages of 8 boxes and 0 packages of 6 boxes.



4. **Building on the Essential Question** How can the x-intercept and y-intercept be used to graph a linear equation? **Sample answer: You can graph a linear equation by finding the x- and y-intercepts and plotting the ordered pairs.**

Rate Yourself!

Are you ready to move on?
Shade the section that applies.



For more help, go online to access a Personal Tutor.



Name _____

My Homework _____

Independent Practice

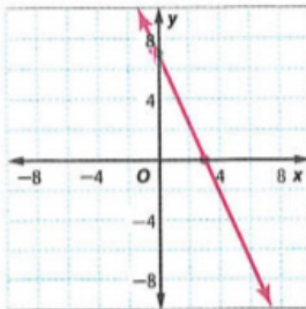
Go online for Step-by-Step Solutions



State the x- and y-intercepts of each equation. Then use the intercepts to graph the equation. (Example 1)

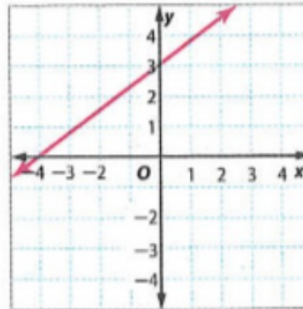
1. $y = -2x + 7$

x-intercept: 3.5; y-intercept: 7



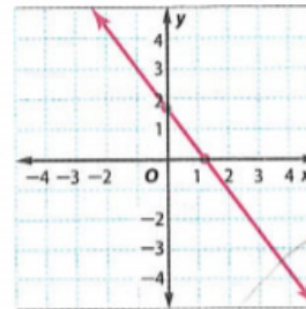
2. $y = \frac{3}{4}x + 3$

x-intercept: -4; y-intercept: 3



3. $12x + 9y = 15$

x-intercept: $1\frac{1}{4}$; y-intercept: $1\frac{2}{3}$

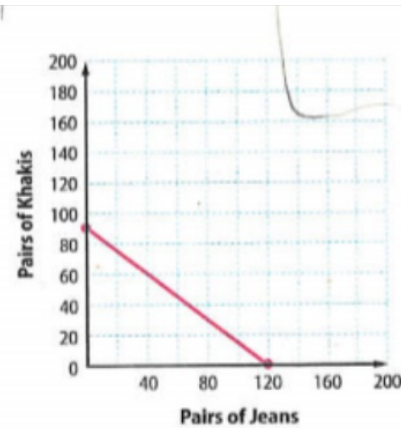


Show your work.

4. The table shows the cost for a clothing store to buy jeans and khakis. The total cost for Saturday's shipment, \$1,800, is represented by the equation $15x + 20y = 1,800$. Use the x - and y -intercepts to graph the equation. Then interpret the x - and y -intercepts. (Examples 2 and 3)

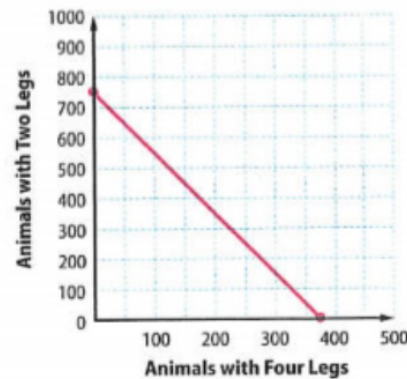
	Jeans	Khakis
Cost per Pair (\$)	15	20
Amount Shipped	x	y

The x -intercept of 120 means that if the store purchased only jeans, they would have 120 pairs of jeans. The y -intercept of 90 means that if the store purchased only khakis, they would have 90 pairs of khakis.



5. The total number of legs, 1,500, on four-legged and two-legged animals in a zoo can be represented by the equation $4x + 2y = 1,500$. Use the x - and y -intercepts to graph the equation. Then interpret the x - and y -intercepts. (Examples 2 and 3)

The x -intercept of 375 means that if the zoo had only four-legged animals, there would be 375 of them. The y -intercept of 750 means that if the zoo had only two-legged animals, there would be 750 of them.



6. **CCSS Multiple Representations** The table shows the group rate for admission tickets for adults and children to an amusement park.

	Adult	Children
Ticket Price (\$)	45	30
Tickets Purchased	x	y

- a. **Symbols** The total cost of a group's tickets is \$1,350. Write an equation to represent the number of adults' and children's tickets purchased.

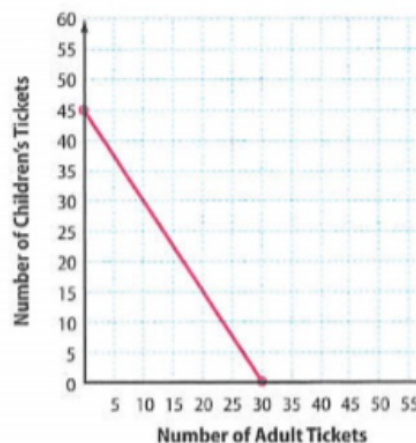
$$45x + 30y = 1,350$$

- b. **Words** What are the x - and y -intercepts and what do they represent? **The x -intercept of 30 means that if only adults bought tickets, 30 tickets would be sold.**

The y -intercept of 45 means that if only children's tickets were purchased, 45 tickets would be purchased.

- c. **Graphs** Use the x - and y -intercepts to graph the equation. Use the graph to find the number of children's tickets purchased if 20 adult tickets were purchased.

15 children's tickets



H.O.T. Problems Higher Order Thinking

7. **CCSS Find the Error** Carmen is finding the x -intercept of the equation $3x - 4y = 12$. Find her mistake and correct it.

After $3x = 12$, Carmen didn't divide both sides by 3 to get the x -intercept of 4.

$$\begin{aligned} 3x - 4y &= 12 \\ 3x - 4(0) &= 12 \\ 3x &= 12 \\ x &= 12 \end{aligned}$$

