

Lesson 11 Practice Problems

1. What is the slope of the graph of $5x - 2y = 20$?

A. -10

B. $-\frac{2}{5}$

C. $\frac{5}{2}$

D. 5

2. What is the y -intercept of each equation?

a. $y = 6x + 2$

b. $10x + 5y = 30$

c. $y - 6 = 2(3x - 4)$

3. Han wanted to find the intercepts of the graph of the equation $10x + 4y = 20$. He decided to put the equation in slope-intercept form first. Here is his work:

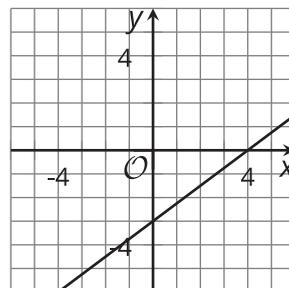
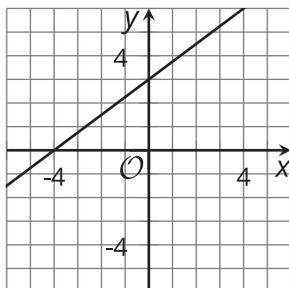
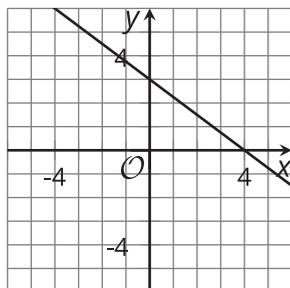
$$\begin{aligned} 10x + 4y &= 20 \\ 4y &= 20 - 10x \\ y &= 5 - 10x \end{aligned}$$

He concluded that the x -intercept is $(\frac{1}{2}, 0)$ and the y -intercept is $(0, 5)$.

a. What error did Han make?

b. What are the x - and y -intercepts of the line? Explain or show your reasoning.

4. Which graph represents the equation $12 = 3x + 4y$? Explain how you know.



5. Clare knows that Priya has a bunch of nickels and dimes in her pocket and that the total amount is \$1.25.

a. Find one possibility for the number of nickels and number of dimes that could be in Priya's pocket.

b. Write an equation that describes the relationship between the number of dimes and the number of nickels in Priya's pocket.

c. Explain what the point $(13, 6)$ means in this situation.

d. Is the point $(13, 6)$ a solution to the equation you wrote? Explain your reasoning.

(From Unit 2, Lesson 5.)

6. A large company releases summary statistics about the annual salaries for its employees.

mean	standard deviation	minimum	Q1	median	Q3	maximum
\$63,429	\$38,439	\$18,000	\$50,000	\$58,000	\$68,000	\$350,000

Based on this information, are there any outliers in the data? Explain your reasoning.

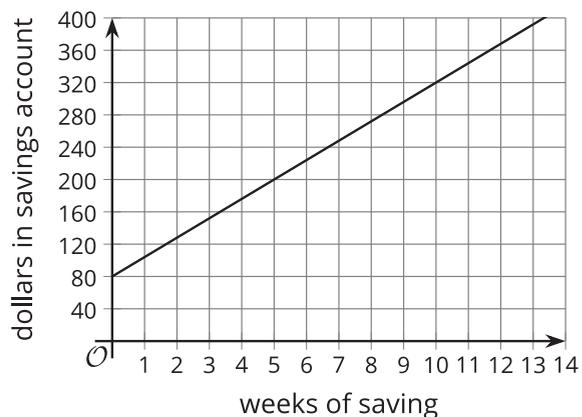
(From Unit 1, Lesson 14.)

7. The graph shows how much money Priya has in her savings account weeks after she started saving on a regular basis.

a. How much money does Priya have in the account after 10 weeks?

b. How long did it take her to save \$200?

c. How much money did Priya have in her savings account when she started to save regularly?



d. Write an equation to represent the dollar amount in her savings account and the number of weeks of saving. Be sure to specify what each variable represents.

(From Unit 2, Lesson 10.)

8. Noah has a coin jar containing d dimes and q quarters worth a total of \$5.00.

Select **all** the equations that represent this situation.

A. $d + q = 5$

B. $d + q = 500$

C. $0.1d + 0.25q = 5$

D. $10d + 25q = 500$

E. $d = 50$

F. $q = 20$

(From Unit 2, Lesson 6.)

9. Noah orders an extra-large pizza. It costs \$12.49 for the pizza plus \$1.50 for each topping. He orders an extra-large pizza with t toppings that costs a total of d dollars.

Select **all** of the equations that represent the relationship between the number of toppings t and total cost d of the pizza with t toppings.

A. $12.49 + t = d$

B. $12.49 + 1.50t = d$

C. $12.49 + 1.50d = t$

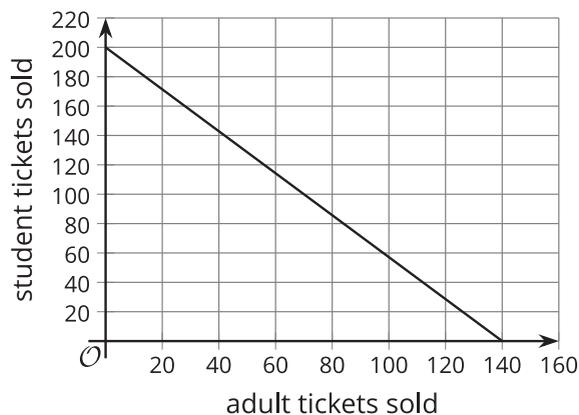
D. $12.49 = d + 1.50t$

E. $t = \frac{d - 12.49}{1.5}$

F. $t = d - \frac{12.49}{1.5}$

(From Unit 2, Lesson 9.)

10. A school sells adult tickets and student tickets for a play. It collects \$1,400 in total.



The graph shows the possible combinations of the number of adult tickets sold and the number of student tickets sold.

What does the vertical intercept $(0, 200)$ tell us in this situation?

- A. It tells us the decrease in the sale of adult tickets for each student ticket sold.
- B. It tells us the decrease in the sale of student tickets for each adult ticket sold.
- C. It tells us that if no adult tickets were sold, then 200 students tickets were sold.
- D. It tells us that if no students tickets were sold, then 200 adult tickets were sold.

(From Unit 2, Lesson 10.)