

Name _____ Date _____

Tickets for Sale

Standard Form of Linear Equations

Vocabulary

Define each term in your own words.

1. standard form
2. slope-intercept form

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Problem Set

Define variables and write an expression to represent each situation.

1. A farmer's market sells apples for \$0.75 per pound and oranges for \$0.89 per pound. Write an expression to represent the total amount the farmer's market can earn selling apples and oranges.
 $a = \text{pounds of apples}$
 $b = \text{pounds of oranges}$
 $0.75a + 0.89b$
2. A photo printing website sells 8×10 prints for \$4.99 and 3×5 prints for \$1.99. Write an expression to represent the total amount the website can earn selling 8×10 and 3×5 prints.
3. A movie theater sells tickets for matinee showings for \$7.00 and evening showings for \$10.50. Write an expression that represents the total amount the theater can earn selling tickets.

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4. A bakery sells muffins for \$1.25 each and scones for \$1.75 each. Write an expression that represents the total amount the bakery can earn selling muffins and scones.

5. A florist sells daisies for \$8.99 a dozen and roses for \$15.99 a dozen. Write an expression that represents the total amount the florist can earn selling daisies and roses.

6. The hockey booster club is selling winter hats for \$12 each and sweatshirts for \$26 each. Write an expression that represents the total amount the booster club can earn selling hats and sweatshirts.

Define variables and write an equation to represent each situation.

7. A florist sells carnations for \$10.99 a dozen and lilies for \$12.99 a dozen. During a weekend sale, the florist's goal is to earn \$650. Write an equation that represents the total amount the florist would like to earn selling carnations and lilies during the weekend sale.
 $c = \text{carnations}$
 $f = \text{lilies}$
 $10.99c + 12.99f = 650$

8. A bakery sells bagels for \$0.85 each and muffins for \$1.10 each. The bakery hopes to earn \$400 each day from these sales. Write an equation that represents the total amount the bakery would like to earn selling bagels and muffins each day.

9. A farmer's market sells oranges for \$0.79 per pound and peaches for \$1.05 per pound. The farmer's market hopes to earn \$325 each day from these sales. Write an equation to represent the total amount the farmer's market would like to earn selling oranges and peaches each day.

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10. The high school soccer booster club sells tickets to the varsity matches for \$4 for students and \$8 for adults. The booster club hopes to earn \$200 at each match. Write an equation to represent the total amount the booster club would like to earn from ticket sales at each match.
11. An electronics store sells DVDs for \$15.99 and Blu-ray discs for \$22.99. The store hopes to earn \$2000 each week from these sales. Write an equation to represent the total amount the store would like to earn each week.
12. Ling is selling jewelry at a craft fair. She sells earrings for \$5 each and bracelets for \$7 each. She hopes to earn \$300 during the fair. Write an equation to represent the total amount Ling would like to earn during the fair.

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The basketball booster club runs the concession stand during a weekend tournament. They sell hamburgers for \$2.50 each and hot dogs for \$1.50 each. They hope to earn \$900 during the tournament. The equation $2.50b + 1.50h = 900$ represents the total amount the booster club hopes to earn. Use this equation to determine each unknown value.

13. If the booster club sells 315 hamburgers during the tournament, how many hot dogs must they sell to reach their goal?

$$2.50b + 1.50h = 900$$

$$2.50(315) + 1.50h = 900$$

$$787.50 + 1.50h = 900$$

$$1.50h = 112.50$$

$$h = 75$$

The booster club must sell 75 hot dogs to reach their goal.

14. If the booster club sells 420 hot dogs during the tournament, how many hamburgers must they sell to reach their goal?

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15. If the booster club sells 0 hot dogs during the tournament, how many hamburgers must they sell to reach their goal?

16. If the booster club sells 0 hamburgers during the tournament, how many hot dogs must they sell to reach their goal?

17. If the booster club sells 281 hamburgers during the tournament, how many hot dogs must they sell to reach their goal?

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18. If the booster club sells 168 hot dogs during the tournament, how many hamburgers must they sell to reach their goal?

Determine the x-intercept and the y-intercept of each equation.

19. $20x + 8y = 240$

$$20x + 8y = 240$$

$$20x + 8(0) = 240$$

$$20x = 240$$

$$x = 12$$

$$20x + 8y = 240$$

$$20(0) + 8y = 240$$

$$8y = 240$$

$$y = 30$$

The x-intercept is (12, 0) and the y-intercept is (0, 30).

20. $15x + 3y = 270$

21. $y = 8x + 168$

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22. $y = -4x + 52$

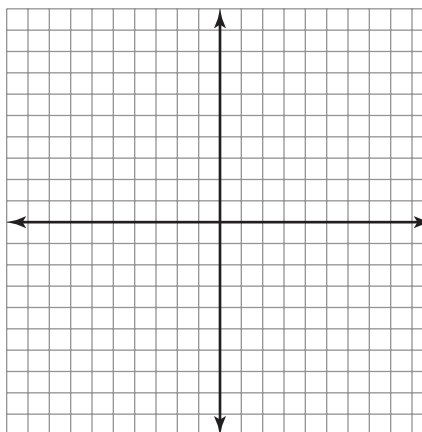
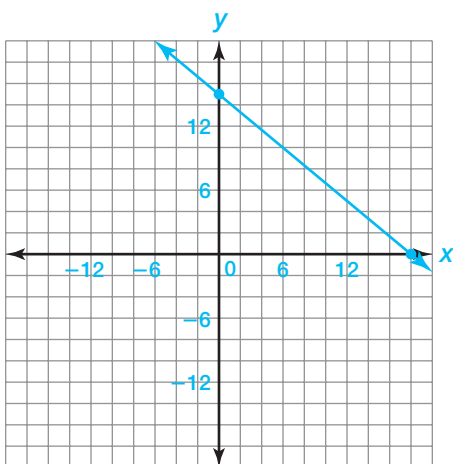
23. $14x + 25y = 342$

24. $y = 6x + 291$

Determine the x-intercept and y-intercept. Then graph each equation.

25. $5x + 6y = 90$

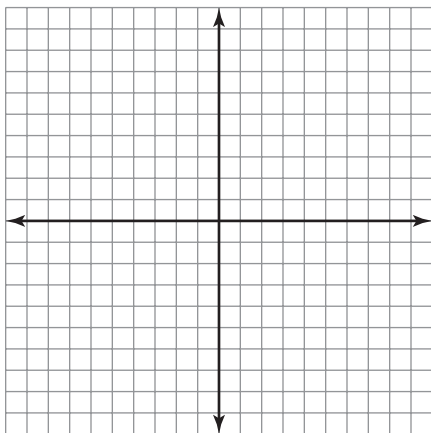
26. $12x - 9y = 36$



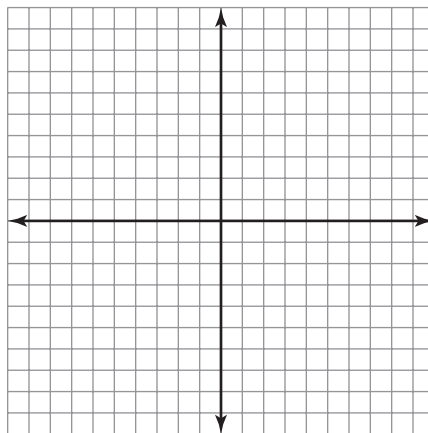
$5x + 6y = 90$	$5x + 6y = 90$
$5x + 6(0) = 90$	$5(0) + 6y = 90$
$5x = 90$	$6y = 90$
$x = 18$	$y = 15$

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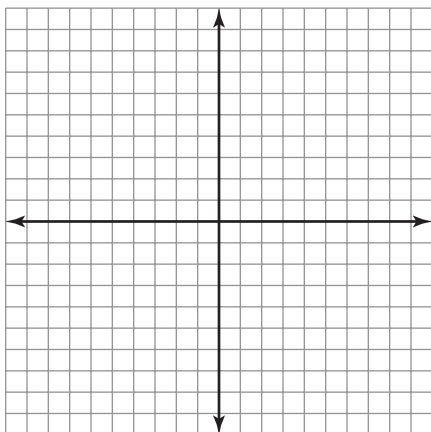
27. $y = 3x - 15$



28. $y = -30x + 180$



29. $6x + 13y = 57$



30. $y = 3x - 41$

