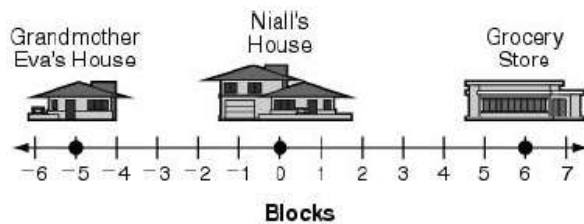


Calculators are permitted.

1 Write a real world situation that has a result of zero.

2 Niall is planning to visit his grandmother Eva.



How far away is Grandmother Eva's house from Niall's house?

3 Write an equivalent expression to $a - b + c$.

4 What is the value of $\left(-\frac{2}{5}\right)\left(\frac{3}{4}\right)\left(-\frac{2}{5}\right)$?

5 Write an equivalent expression to $-\frac{7}{8} \times 13$?

6 Mr. McDonald is draining his pool. The pump he is using changes the water level by $-3\frac{1}{2}$ inches per hour. A stronger pump drains the water 3 times as fast. What would the change in the water level be per hour with the stronger pump?

7 What is the result when -28 is divided by 7 ?

8 Solve. $-3\frac{1}{2} \div 4\frac{3}{4} =$

9 For her birthday party, Margaret had 230 miniature chocolate bars for her guests. If she gave each of the 32 guests the same number of chocolate bars, how many chocolate bars did each guest receive?

10 Write the equivalent decimal for $\frac{2}{5}$.

11 Last Tuesday at the Utica Post Office, $\frac{1}{4}$ of the deliveries were magazines, $\frac{1}{8}$ were packages, and the rest were letters. If the mail carriers delivered 1,600 pieces of mail last Tuesday, how many of their deliveries were letters?

12 Which operation symbol belongs in the box if the expression equals 70?

$$60 - 6 \square 3 + 12$$

13 Jane works 12 hours a week at a movie theater. She gets paid \$7.50 per hour and is getting a 20% raise. How much more money will Jane earn per week after she receives her raise?

14 Simplify the expression:

$$2(3x + 1) - 6(5x - 3)$$

15 Find the sum of the following expressions:

$$7x - 3y, -5x + 10y \text{ and } x - y.$$

16 Art and Mandi collect marbles. Art has three times as many marbles as Mandi. If Art has $3x + 15$ marbles, how many does Mandi have?

17 The length of a rectangle is 5 more than its width, w . Write an expression that represents the perimeter of the rectangle.

18 Which operation could be placed in the box to make the following expression equal to 43?

$$24 \square (6 \div 3) \times 11 - 3$$

19 Evaluate the expression below for $x = -3$.

$$25 - (2x^2 + 5x)$$

20 Pauline paid \$3.85 for a long-distance phone call she made to her grandmother. Her phone company charged \$0.20 to connect and \$0.05 per minute. Solve the equation $0.05m + 0.20 = 3.85$ to find the number of minutes, m , that Pauline was on the phone with her grandmother.

21 Olivia bought b boxes of tissues at \$2.50 each and used a coupon. The amount of money (A) she spent is represented by this equation:

$$A = 2.50b - 1.25$$

If Olivia spent \$13.75, how many boxes of tissues did she buy?

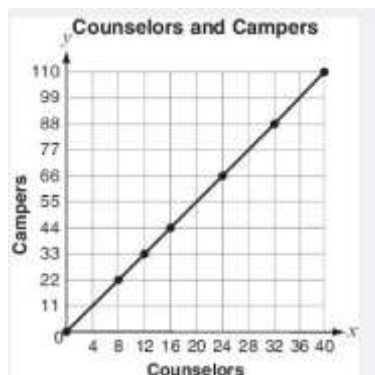
22 Ms. Patel is a scientist. She is doing an experiment that has to be conducted at a certain temperature. The inequality below shows the range of temperatures (in degrees Celsius), t , that are acceptable. Graph all the temperatures that are acceptable for the experiment.

$$t \leq 16$$

- 23** Mark read a 98-page science fiction book. It took him 32.5 minutes on Friday evening and 16.5 minutes on the following Saturday morning to read the entire book. How many pages per minute did Mark read?
- 24** The Trundal family is going to rent a boat. The cost to rent the boat is based on a standard hourly rate. The Perez family paid \$350 to rent the boat for 4 hours. How much should the Trundal family expect to pay to rent the boat for one hour?
- 25** In the table below, does x and y show a proportional relationship?

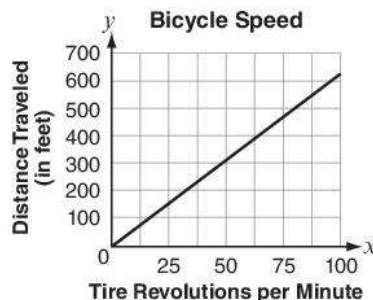
x	y
1	5
3	7
5	9
7	11

- 26** Does the following graph show a proportional relationship? Explain why.



- 27** Last week, Ms. Harris paid \$250 for 40 hours of child care. How much does Ms. Harris pay per hour for childcare?

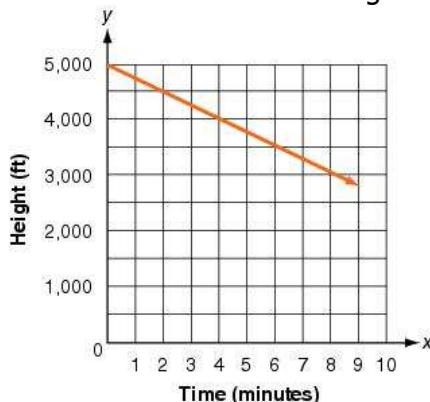
28



John made a graph to show the distance traveled compared with the number of tire revolutions per minute of his bicycle tires.

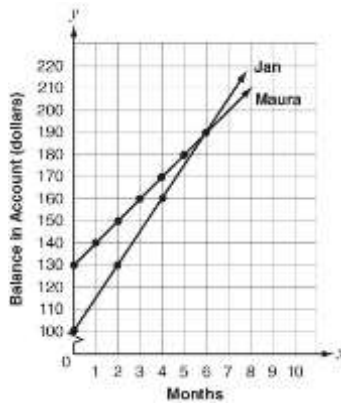
What does the point (1, 6.3) represent?

- 29** John took his pulse and counted 8 beats for a 6 second period. Write and solve a proportion to determine his pulse rate in beats per minute?
- 30** To make lemonade for 10 people, she needs 30 lemons. Write an equation that can be used to find the number of lemons needed, y , to make lemonade for x people?
- 31** Costco is having a 15% off sale on cameras. Max purchased a camera for \$236.30. What was the original price?
- 32** Sam went to the store to buy a pair of jeans that cost \$35 and were on sale for an additional 20% discount. Including a sales tax of 8.5%, what was the total price Sam paid for his jeans?
- 33** A \$20 shirt is marked down 30% in a store. The following week, a sale reduces the price of the shirt by an additional 50%. What is the sale price of the shirt?
- 34** Mrs. Smith has 42 students in her Algebra class. Three students dropped the class. What is the percent of decrease in students? Round to the nearest percent.
- 35** The graph shows the height of a hot air balloon. What is the balloon's initial height? What is the constant rate of change?



36 The balances in Jan and Maura's bank accounts are shown below.

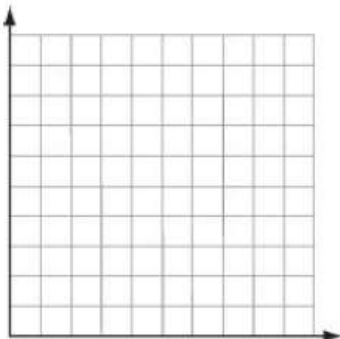
How much money did Jan and Maura have in their accounts initially? How much are Jan and Maura adding to their accounts each month? How many monthly deposits will be needed for the accounts to have equal balances?



37 Kirk recorded his weekly bank account balance in the table below.

Week	Balance
1	\$150
2	\$300
3	\$450

Draw a graph of the data in the table on the grid below. Label the axes and use appropriate scales.



What is the slope of this line?
What is the equation of this line?

38 What is the slope of the line through the points (3,5) and (8,3)

39 Does the equation below have one solution, no solution, or infinitely many solutions?

$$-7(3m + 3) + 2 = -16m - 19 - 5m$$

40 Does the equation below have one solution, no solution, or infinitely many solutions?

$$8p - 6 - 2p = 3(2p - 3) + 1$$

41 Solve the following equation for x .

$$-8(x - 6) = x + 10 + 5x$$

42 Find the solution to this system of equations.

$$3x + y = 6$$

$$y = -4x + 5$$

43 There are 28 coins that are all nickels and dimes. The value of the coins is \$2.05. How many nickels are there?