

### Rising Grade 8 Summer Math Packet

The problems in this packet are designed to help you review topics from previous mathematics courses that are essential to your success in grade 7. You are expected to bring this completed packet to class on the first day of school. In addition, this packet will count as part of your first-quarter grade. **Upon returning, you will be ASSESSED on the content of this packet.** All content outlined in the packet is grade 1 material. Neatly **SHOW YOUR WORK!**

1. A company loses \$5,400 as the result of a manufacturing defect. Each of the 8 owners have agreed to pay an equal amount,  $x$ , to pay for the loss.

#### Part A

Write an expression to show the total loss after the owners contribute some money.

#### Part B

How much did each owner contribute if the total loss is \$600 after their contributions?

Time (s)	30	90	150
Number of Wing beats	420	1,260	2,100

2. A car travels  $2\frac{5}{8}$  miles in  $3\frac{1}{2}$  minutes at a constant speed. How far did the car travel in 5 minutes?
3. Select all the expressions that are equivalent to  $9 + 7x - 3y$ .
  - $9 + 7x + 3y$
  - $9 - 7x - 3y$
  - $9 - 7x + 3y$
  - $9 + 7x + (-3y)$
  - $9 - (-7)x - 3y$
4. Select all the products that are negative, if  $x$  is negative.
  - $-6x$
  - $4x$
  - $-3(-x)$
  - $0x$
  - $-x$
5. Ariel collected information about mockingbirds for a science project.

#### Part A

How many times will a mockingbird beat its wings in 2 **minutes**?

#### Part B

Ariel states that a mockingbird beats its wings approximately 0.07 times per second. Is Ariel correct? Explain.

6. Each sheet cake requires 3 cups of flour and 2 cups of sugar. If a bakery has 75 cups of flour and 75 cups of sugar, how many sheet cakes can be made? Will there be any ingredients left over? Explain.

7. Select all the expressions that are rational numbers.

- 3.14159...
- 9.1234567123...
- 9.293847210103938...

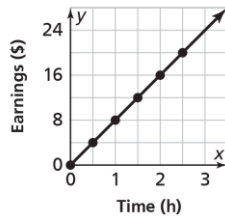
$\frac{22}{7}$

- 7
- 26

8. The ratio of the number of model cars that Jim owns to the number of model cars Terrence owns is 8 : 6. Terrence owns 36 model cars. How many model cars does Jim own? Will the ratio change if Jim and Terrence each sell ten of their model cars? Explain.

9. Erik rides his motorbike  $26\frac{2}{3}$  miles in  $\frac{2}{3}$  hour. What is Erik's average speed in miles per hour?

10. The graph represents the amount of money Sal earns for babysitting.



**Part A**

What does the ordered pair (2.5, 20) represent in the situation?

**Part B**

Does the graph represent a proportional relationship? Explain.

**Part C**

What is the linear equation represented by the graph?

11. Use the expression  $24x - 56y + 72$ .

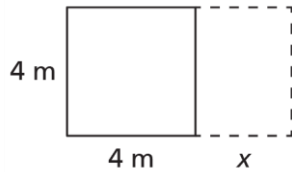
**Part A**

What is the first step in factoring the expression?

**Part B**

Factor the expression.

12. Megan's room was remodeled. The new area of the room is 175% of the previous area. Only the length of the room changed.



**Part A**

Write an expression for the new area of Megan's room.

**Part B**

By how many square meters has the area of Megan's room increased? Explain.

13. The Lee family buys a new car that has a sales price of \$35,000. If the car dealer requires a minimum down payment of 15%, what is the minimum down payment the Lees must pay for their car?
14. Select all the expressions that are equivalent to  $24x + 12$ .
- $2(12x + 6)$
  - $-6(-4x - 2)$
  - $-3(8x - 4)$
  - $12(1 + 2x)$
  - $-4(-6 - 3x)$
15. James borrows \$4,200 to pay his college tuition. He signs a 5-year simple interest loan. If the monthly payments are \$78.40, what is the interest rate on the loan?
- A. 2%
  - B. 2.4%
  - C. 3%
  - D. 3.2%
16. The number of people estimated to vote in an election was 7,000. The actual number of people who voted was 5,600.

**Part A**

By what percent did the estimate vary from actual turnout?

**Part B**

In the previous election 6,400 people voted. What is the percent decrease in actual voters?

17. Use the expression below.  
 $5a - 2b - 3 + 2b - 6a$

**Part A**

Simplify the expression.

**Part B**

Write an equivalent expression.

18. Select all the expressions that are equivalent to  $15 - 5x$ .

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

19. A store owner spends  $7x + 13$  dollars on two orders of boxes of light bulbs, including shipping.

**Part A**

If she spends  $3x + 5$  dollars on the first order of lightbulbs, how much does she spend on the second order?

**Part B**

If the store owner spent a total of \$90 on both orders, how much does a box of lightbulbs cost?

20. The temperature of chicken soup is  $192.7^{\circ}\text{F}$ . As it cools, the temperature of the soup decreases  $2.3^{\circ}\text{F}$  per minute.

**Part A**

What is the temperature of the soup after 25 minutes?

**Part B**

How many minutes will it take for the soup to cool to  $100.7^{\circ}\text{F}$ ?

21. A skin-care company had 1,500 people try a new acne cream. Nine people had a mild allergic reaction. The formula is then improved and those 1,500 people try the new cream. Only 4 of them had a mild allergic reaction. What is the percent decrease in number of allergic reactions? Round your answer to the nearest percent.

22. Cindy spent \$65.25 on ingredients for blueberry pies and \$62.84 on ingredients for cherry pies. Each slice of pie sells for \$3.50.

**Part A**

Write an expression to represent Cindy's profit if she sells  $b$  slices of blueberry pie and  $c$  slices of cherry pie.

**Part B**

Cindy sells 24 slices of blueberry pie and 15 slices of cherry pie. The next day, she sold 26 slices of blueberry pie and 17 slices of cherry pie. What was her total profit?

23. A store sells an item for \$35 after a 25% markup. What is the price the store paid?

- A. \$8.75  
B. \$28.00  
C. \$43.75  
D. \$140.00

24. Paint costs \$3.99 per can and brushes cost \$2.50 each. The sales tax rate is 5%. Which expression represents the total cost of  $p$  cans of paint and  $b$  paint brushes?

- A.  $3.99p + 2.50b$

- B.  $0.05(3.99p + 2.50b)$
- C.  $1.05(3.99p + 2.50b)$
- D.  $-1.05(3.99p + 2.50b)$

25. The sales tax rate is 7.25%.

Part A

How much tax is added on an item that costs \$56.00?

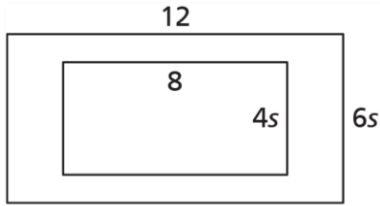
Part B

If \$36.25 in tax is added to the price of an item, what was the original price of the item?

26. Natalie opened a bank account that earns 2.5% simple interest. If her account earned \$180 over ten years, how much was Natalie's initial deposit when she opened the account?

- A. \$0.45
- B. \$108
- C. \$720
- D. \$7200

27. What is the area of the frame around the picture?



28. Maria receives a commission of 11.5% for each pair of shoes she sells.

Part A

She earned \$207 in commission last week. What was the dollar amount of shoes she sold?

Part B

How can the whole be calculated when the percent and part are known?

29. Which expression is equivalent to

$$\frac{1}{4}x + 3 - \frac{1}{3}x + (-2)?$$

A.  $x + 5$

B.  $\frac{1}{12}x - 1$

C.  $x + 1$

D.  $1 - \frac{1}{12}x$

30. Petra wants to buy a skateboard. The skateboard deck usually costs \$37.50, but it is on sale for 20% off.

**Part A**

If the sales tax rate is 5.2%, how much will Petra pay for the skateboard deck in all?

**Part B**

If the selling price of \$37.50 represents a 20% markup, will the store still make a profit after the 20% markdown? Explain.

31. Select all the expressions that are

equivalent to  $\frac{-5}{-\frac{1}{3}}$ .

$\left(-\frac{5}{6}\right) \cdot (-3)$

$\left(-\frac{6}{5}\right) \cdot (-3)$

$\left(-\frac{6}{5}\right) \cdot \left(-\frac{1}{3}\right)$

$\left(\frac{5}{6}\right) \cdot \left(\frac{1}{3}\right)$

$\frac{5}{6} \cdot (-3)$

32. Owen and Jesse go to a restaurant for breakfast. A 7% sales tax is applied to their \$21.60 bill. If Owen and Jesse add a 15% tip after the tax is applied, what is the total cost, including tip?

33. A fruit stand sells mangoes for \$3.49 per pound, papayas for \$1.40 per pound, and coconuts for \$1.24 per pound.

**Part A**

Write an expression to represent the total price of  $m$  pounds of mangoes,  $p$  pounds of papayas, and  $c$  pounds of coconuts.

**Part B**

What is the total cost of 3 pounds of mangoes, 4 pounds of papayas, and 6 pounds of coconuts?

34. Olivia has \$240 in her bank account. Each month, her bank deducts a \$12.50 fee for maintaining a balance below \$250. If Olivia makes no other deposits or withdrawals, how much money will be in her account at the end of five months?
- A. \$62.50  
B. \$177.50  
C. \$187.50  
D. \$302.50
35. Rebecca ran 21 miles in 5 hours. If she ran at a constant speed, how many miles did she run in 2 hours?
- A. 8.4 miles  
B. 42 miles  
C. 4.2 miles  
D. 1.2 miles

36. At a flea market, used computer games are sold at the prices shown in the table below.

Number of Games	Price (\$)
2	9.00
5	22.50
7	31.50

Do the number of games and price form a proportional relationship? Explain.

37. Kaylee obtains a loan with simple interest to buy a car that costs \$8,500. If Kaylee pays \$1,020 in interest during the four-year term of the loan, what was the rate of simple interest?
38. Claire buys a jacket that originally cost \$76. The price is marked down 25% for a sale, and Claire has a coupon to further reduce the marked down price by 10%. How much does Claire pay for the jacket?
- A. \$49.40                      C. \$57.00  
B. \$51.30                      D. \$68.40
39. A community service group organizes a car wash that raises  $7c - 18$  dollars and a spaghetti dinner that raises  $6s - 45$  dollars. Which expression represents the total amount of money raised?
- A.  $13cs - 63$                       C.  $7c + 6s - 63$

- B.**  $7c + 6s + 63$       **D.**  $7c + 6s - 27$

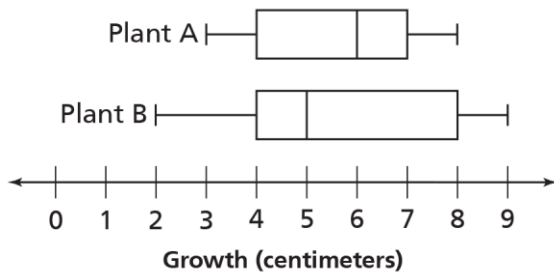
**40.** Maxwell’s vegetarian tacos require  $\frac{3}{4}$  tablespoon of chili powder for every  $\frac{1}{2}$  pound of vegetables. How much chili powder will Maxwell need if he uses  $1\frac{3}{4}$  pounds of vegetables?

- A.**  $2\frac{1}{4}$  tablespoons  
**B.**  $2\frac{1}{2}$  tablespoons  
**C.**  $2\frac{5}{8}$  tablespoons  
**D.**  $3\frac{1}{4}$  tablespoons

**41.** Theo budgets \$156 for karate classes. He buys a karate uniform, called a dogi, for \$12. If it costs \$8 to attend each karate class, which inequality below represents the number of classes,  $c$ , that Theo can take?

- A.**  $17 \leq c$                       **C.**  $18 \leq c$   
**B.**  $18 \geq c$                       **D.**  $17 \geq c$

**42.** Chloe compares the growth of plant species A and B.



Part A

What do the box plots tell you about the growth of a typical plant of each species? Explain.

Part B

What do the box plots tell you about the variability of the data?

**43.** Which graph represents the solution of the inequality below?

$-1.2x - 6.5x \leq 2.3x + 5$

- A.**
- B.**
- C.**
- D.**

**44.** Kai randomly surveys eighth graders at his school and learns that 7 of 35 respondents own a video

gaming system. Based on these data, how many of the 150 eighth-grade students in Kai's school would be expected to own a video gaming system?

- A. 15 students
- B. 25 students
- C. 30 students
- D. 50 students

45. Solve the inequality below for  $x$ .  
 $-3.2(2x - 1) \leq 17.6$

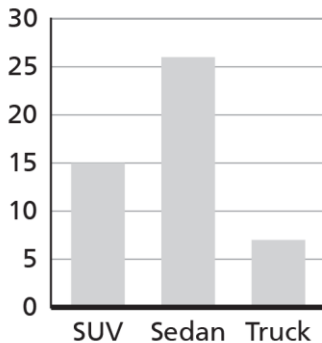
46. A student council president wants to learn about the preferred theme for the upcoming spring dance. Select all the samples that are representative of the population.

- All students at her lunch table
- Every fifteenth student who enters the school in the morning
- All students on her bus
- Every ninth student from an alphabetical list of students
- All seventh graders

47. The seventh grade wants to break last year's record of 78 coats collected for the annual clothing drive. They have already collected 13 coats.

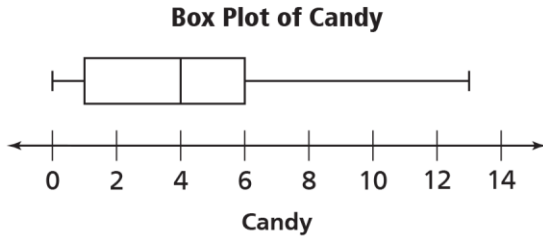
Graph the solution to an inequality that represents the number of coats,  $c$ , that the seventh grade must still collect on a number line.

48. Paisley randomly surveys teachers about the type of car they drive.



If Paisley randomly surveys another 300 teachers, how many would she expect to drive an SUV?

- A. 45
  - B. 94
  - C. 15
  - D. 163
49. Six friends are selling crafts at a show. They each need to pay \$7.20 to pay for the table rental. They each sell 3 items. If every item is the same price, and the 6 friends make a total profit of \$25.20, what was the sale price of each item?
- A. \$1.00
  - B. \$1.80
  - C. \$3.80
  - D. \$4.20
50. Samuel surveys 15 students at his school and asks them: "How many candies per day do you usually eat?"  
Samuel uses his results to make the following box plot.



What are the summary values given by this box plot?

- Minimum: \_\_\_\_\_  
 Maximum: \_\_\_\_\_  
 Range: \_\_\_\_\_  
 Median: \_\_\_\_\_  
 Interquartile range: \_\_\_\_\_

51. Find the solution of the following equation.

$$3.75x + 15 = 63.75$$

- A.  $x = 4$   
 B.  $x = 8$   
 C.  $x = 13$   
 D.  $x = 17$
52. Braden is comparing statistics about the prices of DVD players from two different stores.

	Store A (\$)	Store B (\$)
Mean	61	58
Median	57	56
Range	11	7
IQR	7	4
MAD	4	2

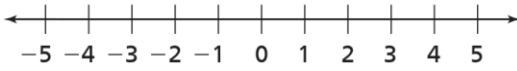
Part A

Compare the measures of center of the data sets.

Part B

Compare the variability of the data of each store.

53. Solve the inequality  $\frac{2}{3}x - \frac{5}{6} \geq \frac{1}{2}$ . Then graph the solution on a number line.
54. A grocery store buys oranges from two different farmers. The mean weight of farmer A's oranges is 8 oz. The mean weight of farmer B's oranges is 9.1 oz. The MAD of both data sets is 2. What can you

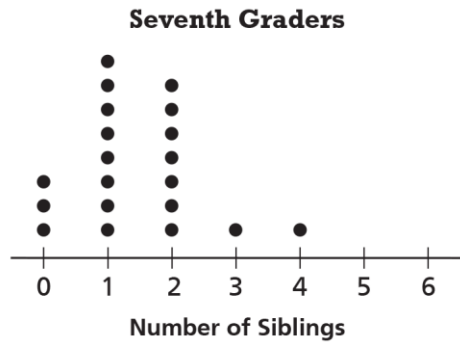
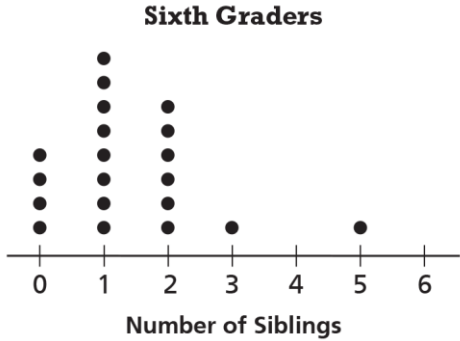


- B. The data sets are very different.  
 C. The variabilities of the sets of oranges are similar.  
 D. The mean is small.
55. On a cross-country bicycle trip, participants ride about 75 miles per day. Approximately how many days,  $d$ , must they ride to travel at least 4,325 miles?  
 Part A  
 Write an inequality to represent the situation.

Part B

Solve the inequality. What does the solution represent in this situation?

56. Data from a random survey asking sixth and seventh graders about the number of siblings in their families are recorded in the dot plots below.



Compare the mean values of the data sets.

57. Marsha had \$4.00 in her pocket in the morning, and Mark had \$0.50. Marsha sells her sweets for \$0.25 each, and Mark sells his for \$0.50 each. If Marsha and Mark both sold the same number of sweets, and they have the same amount of money at the end of the day, how many sweets did they each sell?

58. Riley records the number of homework assignments completed by randomly selected students in her school on Monday in the table below.

Grade	Assignments Completed
eighth	5, 4, 5, 4, 4, 5, 4, 5
seventh	6, 5, 5, 5, 6, 6, 5, 6
sixth	5, 3, 4, 3, 5, 4, 4, 4

Make a comparative inference based on the mean values of each data set.

59. Lincoln is saving \$360 to buy a new bike. He already has \$85 and can earn \$12 per hour at work. Which of the following equations describes the number of hours,  $h$ , for which Lincoln must work to earn enough money to buy the new bike?

- A.  $360 - 12 = 85h$
- B.  $360h = 12 + 85$
- C.  $360 - 85 = 12h$
- D.  $85 = 360 + 12h$

Dave is 8 years younger than 4 times Julia's age. If Dave is 16, how old is Julia?

- A. 6 years
- 58B.** 24 years
- C. 32 years
- D. 56 years

70. Maggie is rock climbing. After reaching the summit, she descends 14 feet in  $2\frac{1}{3}$  minutes. If she continues at this rate, where will Maggie be in relation to the summit after 8 minutes?

71. Oscar rides his skateboard  $\frac{5}{8}$  mile in  $\frac{1}{4}$  hour. How fast, in miles per hour, does he ride his skateboard?

- A.  $\frac{5}{32}$  mile per hour
- B.  $\frac{2}{5}$  mile per hour
- C.  $2\frac{1}{2}$  miles per hour
- D. 3 miles per hour

72. Jorge finds that 56% of his 75 classmates like salsa music and 80% of his 60 relatives like salsa music. How many more of Jorge's relatives, as compared to his classmates, like salsa music?

- A. 6
- B. 8
- C. 42
- D. 48

73. There are 9.5 ounces of juice in a container. An additional 1.75 ounces of juice are poured

into the container each second. How many ounces of juice are in the container after 6 seconds?

- A. 11.25 ounces
- B. 17.25 ounces
- C. 20 ounces
- D. 57 ounces

74. A game of chance has a spinner with five equal-sized sections. The results of 625 spins are shown below.

Color	Frequency
Orange	118
Purple	137
Brown	122
Yellow	106
Green	142

Part A

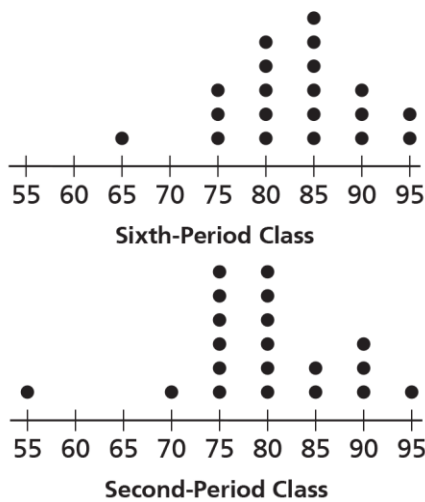
For which color is the experimental probability closest to the theoretical probability? Explain.

Part B

For which color is the difference between the theoretical probability and experimental probability greatest? Explain.

75. Rose bought a bag of potatoes for \$6.00 and some granola bars for \$5.25 per package. Her total bill was \$74.25. How many packages of granola bars did she buy?

76. The following dot plots describe the test scores on Mr. Santos’s final exam.

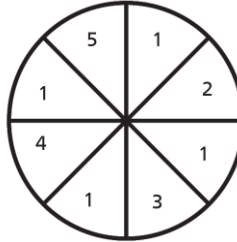


Form a valid inference based on the means of the data sets.

77. Select all the figures that could represent the cross section of a rectangular pyramid.

- Circle
- Cube
- Rectangle
- Square
- Triangle

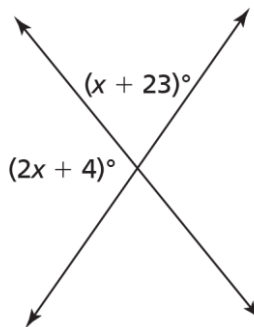
78. In a game of chance, players spin the pointer of a spinner with eight equal-sized sections.



What is the probability that the pointer will land in an odd-numbered section?

79. Silas has  $5\frac{1}{4}$  cups of flour. He uses  $3\frac{1}{2}$  cups to bake bread, then he borrows another 2 cups from his neighbor. He wants to bake cookies, which take  $2\frac{3}{4}$  cups of flour. Does he have enough? How much will he have left over, or how much more does he need?
- A. Yes, he has  $\frac{1}{4}$  cup left.
  - B. No, he needs 1 cup more.
  - C. Yes, he has 1 cup left.
  - D. No, he needs  $\frac{1}{4}$  cup more.
80. Wyatt uses 3.15 cups of flour in a recipe that makes 9 shortcakes. Cora uses 2.4 cups of flour in a recipe that makes 8 shortcakes. How much more flour per shortcake is needed for Wyatt's recipe?
- A. 0.05 cup
  - B. 0.20 cup
  - C. 0.25 cup
  - D. 0.50 cup

81. Two lines are intersecting. What is the value of  $x$ ?



82. Caleb's puppy weighs 2,250 grams. If the puppy weighed 600 grams at his last visit to the veterinarian's office, what is the percent increase in the puppy's weight rounded to the nearest whole

number?

83. Simplify the expression below:

$$3(7x) - 2(4 - x)$$

- A.  $13 - 2x$       C.  $23x - 8$   
B.  $13 + 2x$       D.  $20x - 8$

84. Of all sixth graders, 70% sent a text message yesterday. Ten trials of a simulation are conducted and the data are recorded below.

62072, 34570, 80983, 04292, 83150, 36330, 96268, 14077, 77985, 13511

The numbers 0 through 6 represent students who sent a text yesterday, and the numbers 7 through 9 represent students who did not send a text yesterday.

Based on the simulated data, what is the probability that 3 or more of a group of 5 students randomly selected will send a text today? Explain.

85. Ezra is saving money to buy a snowboard that costs \$225. He already has \$45 and can earn the rest by walking ten dogs. If  $d$  represents how much he earns for walking each dog, which of the following equations can be solved to find how much Ezra is paid for walking each dog?

- A.  $225 = 45d - 10$   
B.  $225 - 45 = 10d$   
C.  $25 + 45 = 10d$   
D.  $45 = 225 - d$

86. Ivy randomly surveys students in her school to learn about mobile phone password use. Of 25 respondents, 14 use a password.

Part A

Based on Ivy's data, how many of the 275 students in her school would be expected to use a password?

Part B

If Ivy conducted her survey of 25 students on a volunteer basis, are the results representative of the school? Why or why not?

87. A probability model includes

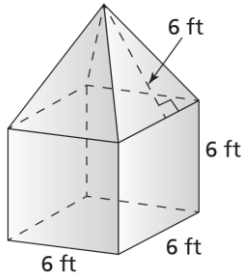
$P(\text{red}) = \frac{2}{7}$  and  $P(\text{blue}) = \frac{3}{14}$ . Select all the probabilities that could complete the model.

$P(\text{green}) = \frac{2}{7}, P(\text{yellow}) = \frac{2}{7}$

$P(\text{green}) = \frac{3}{8}, P(\text{yellow}) = \frac{1}{8}$

$P(\text{green}) = \frac{1}{4}, P(\text{yellow}) = \frac{1}{4}$

88.



- $P(\text{green}) = \frac{5}{21}, P(\text{yellow}) = \frac{11}{21}$
- $P(\text{green}) = \frac{3}{7}, P(\text{yellow}) = \frac{1}{14}$

The numbers of blue and green beads Emma uses to make 5 different pieces of jewelry are recorded below.

Blue	4	8	12	16	20
Green	7	14	21	28	35

Which of the following equations relates the number of green beads,  $g$ , to the number of blue beads,  $b$ ?

- A.  $g = \frac{4}{7}b$
- B.  $b = \frac{7}{4}g$
- C.  $g = \frac{7}{4}b$
- D.  $7g = 4b$

89. Mia agrees to borrow a 3-year loan with 4% simple interest to buy a motorcycle.

Part A

If Mia will pay a total of \$444 in interest, how much money did she initially borrow?

Part B

How much interest would Mia pay if the simple interest rate were 5%?

90. Solve the equation below.

$$3(17x - 6.5) = 108$$

91. A fire hydrant with a blue cap provides water at a rate of 1,500 gallons per minute. A fire hydrant with a green cap provides water at a rate of 1,000 gallons per minute. A fire hydrant with a purple cap provides water at half the rate of a fire hydrant with a green cap.

Part A

Write an equation to relate the flow of water from the blue hydrant,  $b$ , to the flow from the green hydrant,  $g$ .

Part B

Write an equation to relate the flow of water from the purple hydrant,  $p$ , to the flow from the blue hydrant,  $b$ .

92. Brooke paints the outsides of the square walls and triangular ceilings of her treehouse. What area does she paint?

93. Three boys and four girls enter a contest at the local movie theater. A randomly chosen winner will be awarded a free movie ticket, a collectible poster, or free popcorn. What is the probability that a girl will win free popcorn?
- A.  $\frac{3}{21}$
- B.  $\frac{4}{21}$
- C.  $\frac{3}{7}$
- D.  $\frac{4}{7}$
94. Five sixths of Teddy's cousins can do 15 push-ups in one set. Which decimal is equivalent to the fraction of Teddy's cousins who can do 15 push-ups?
- A. 0.4
- B. 0.56
- C.  $0.\overline{83}$
- D.  $0.\overline{83}$
95. Conor buys 75 tokens for games at the arcade. The price to play each game is 3 tokens. If Conor has already played  $x$  games, which expression is equivalent to the number of tokens that remain?
- A.  $3x - 75$
- B.  $3(25 - x)$
- C.  $3(25 + x)$
- D.  $75 + 3x$
96. A family drives 325 miles per day during a road trip.
- Part A
- Write an inequality to find how many days,  $d$ , the family must drive to travel at least 1,300 miles.
- Part B**
- For how many days must the family drive to travel at least 1,300 miles?
97. The wheels on Jason's dirt bike measure 19 inches in diameter. How many revolutions will the wheels make when Jason rides for 500 feet? Use 3.14 for  $\pi$ . Round to the nearest whole revolution.
- A. 8 revolutions
- B. 21 revolutions
- C. 101 revolutions
- D. 316 revolutions
98. Ms. Alvarez wants to determine the seventh graders' preferences for the location of the end-of-year field trip. Which of the samples is representative of the population?
- A. All students in Ms. Alvarez's fifth-period class

- B. All students in Ms. Alvarez’s advisory group
- C. Every third student from an alphabetical list of all students in the entire school district
- D. Every fifth student from an alphabetical list of all seventh graders in the school

99. A storage locker measures 8 feet wide, 12 feet deep, and 9 feet high. The monthly rental price for the locker is \$3.60 per cubic yard. How much does it cost to rent the locker each month? Explain.

100. Select all the rational numbers.

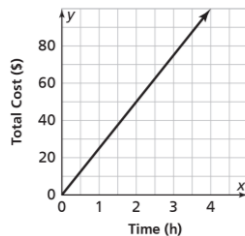
- 3.02859...
- 3
- 3.14159...
- $3.\bar{7}$
- 1.41421...

101. Six cell phones weigh 46.2 ounces. Fourteen cell phones weigh 107.8 ounces. Does this represent a proportional relationship? Explain. If so, state the constant of proportionality.

102. A scuba diver is 15.5 feet below the surface of the water. If the diver continues to swim downward at a rate of 2.5 feet per second, what integer represents her location relative to the surface after 7 seconds? How far does the diver have to go to return to the surface?

103. The record high temperature on January 15 is 41°F. The record low temperature on that day is -16°F. What is the difference in the record temperatures?

104. The graph represents the cost of renting a generator from a hardware store.



**Part A**

What does the point (0, 0) mean in the problem situation?

**Part B**

Choose one ordered pair on the graph and explain what it means in the problem situation.

105. Marcelo had \$49.13 in his bank account. He paid two fees of \$32.50 each, and then he made two deposits of \$74.25 each.

**Part A:** Write an expression to represent the situation.

**Part B:** What is the balance in Marcelo’s account now?

106. Select all the expressions that are equivalent to  $(-60) \div 5$ .

- $60 \div (-5)$   
  $(-60) \div (-5)$   
  $(-60) \times \frac{1}{5}$   
  $60 \times \left(-\frac{1}{5}\right)$   
  $(-60) \times \left(-\frac{1}{5}\right)$

107. A family drives  $4\frac{1}{2}$  miles in  $\frac{1}{10}$  of an hour. What is their rate of speed in miles per hour?

108. An overweight dog is put on a special diet. Use the table to determine the dog's average weight change per week.

Week Number	Weight Change (oz)
1	-1.5
2	2.2
3	-0.8
4	-1.6
5	-0.6

109. Tomic and Brooke make a game of shooting free throws. Each basket is worth  $2\frac{1}{2}$  points. Each miss is worth  $-\frac{3}{4}$  points. Out of 30 free throws, they make 16 baskets.

**Part A**

Tomic calculated incorrectly that they had scored  $50\frac{1}{2}$  points. Explain his likely error.

**Part B**

What is the correct number of points that Tomic and Brooke scored?

110. Kenny bought a 50-pound bag of chicken feed for \$29.98 and a 25-pound bag for \$15.49. Can you use proportional reasoning to find the price of a 40-pound bag? Explain.