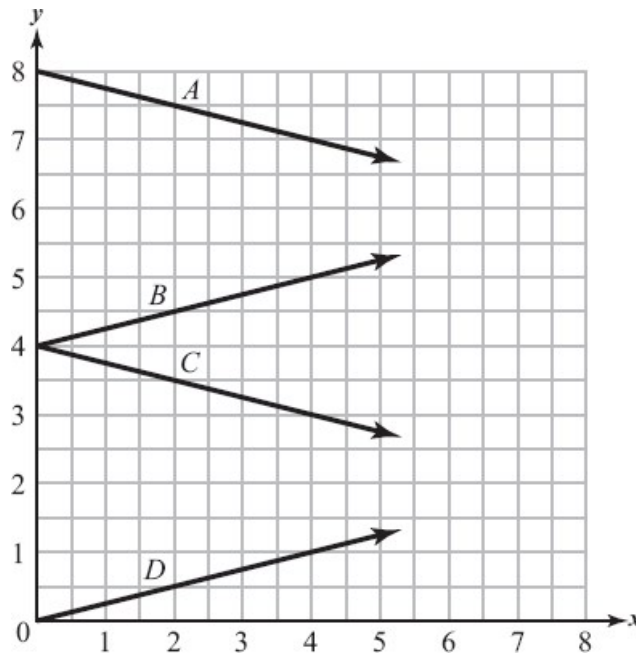TEST NAME: **Winter Break Packet**
TEST ID: **26448**
GRADE: **SEVENTH GRADE**
SUBJECT: **Mathematics**
TEST CATEGORY: **My Classroom**

Read the passage - 'G8 baseline q8' - and answer the question below:

G8 baseline q8

1. Which line represents a proportional relationship?

   A. line A

   B. line B

   C. line C

   D. line D

2. Ms. Smith's special account has a balance of $43.00. She wrote a check for $50.00.
   What is her new balance?

   A. $93.00

   B. $7.00

   C. -$7.00

   D. -$93.00

3. Find the average of 10, -16, 8, 5, -20, -5, and -3.

    A. -5

    B. -3

    C. 10

    D. 3

4. Nathan has three pieces of wood. The first is 9.8 feet in length, the second is 7.5 feet in length, and the third is 12 feet in length. He uses 5.2 feet from the first piece and 6.1 feet from the second piece. He does not use the third piece of wood. How many feet of wood does Nathan **not** use?

    A. 11.3 feet

    B. 18.0 feet

    C. 29.3 feet

    D. 40.6 feet

5. Which of the following is equivalent to $1\dfrac{5}{8}$?

    A. 0.158

    B. 1.625

    C. 1.58

    D. 15.8

6. What is the decimal equivalent of $\dfrac{13}{16}$?

    A. 0.81

    B. 0.812

    C. 0.8125

    D. $0.\overline{8125}$

7. Evaluate $\left|-8\right| - \left|-2\right| + \left|-3\right|$

    A. 13

    B. -13

    C. -9

    D. 9

8.

A dolphin calf swims at a depth of $-\dfrac{7}{4}$ feet from the sea surface. An adult dolphin swims

at a depth $\dfrac{5}{3}$ times the depth at which the calf swims. What is the depth, in feet, of the

adult dolphin from the sea surface?

A.
$-2\dfrac{11}{12}$

B.
$-1\dfrac{1}{20}$

C.
$1\dfrac{1}{20}$

D.
$2\dfrac{11}{12}$

9. Marta earns $8.76 per hour at her job. Last week, she worked for 32.5 hours. On average, if Marta worked 5 days last week, how much did she earn **each day**?

10. The value of Acme Stock decreased $40 over the last 5 days. What integer represents the average decrease in stock value each day?

A. -5

B. -8

C. -20

D. -200

11. Rose borrows $5.00 from her father to buy items at a gas station. Rose also borrows $11.00 more from her brother.

Part A

Rose pays back $3.50 to her father and $9.50 to her brother. Explain how you would use the number line to find the total amount of money Rose still owes her family.
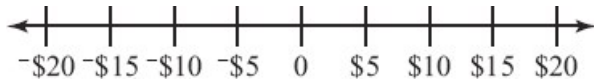
Part B

What is the remaining amount of money Rose owes?

$_____

12. A class is collecting cans to recycle. Their goal is to collect 200 ounces of cans. The first day 3 students each bring in 12.7 ounces of cans, and 4 students each bring in 17.3 ounces of cans. How many more ounces of cans must be collected to reach the goal?

    A. 30 ounces

    B. 92.7 ounces

    C. 107.3 ounces

    D. 170 ounces

13. Paul owes his father $10.75. He borrows $5.50 more from his father. Which of the following best represents Paul's debt to his father?

    A. $16.25

    B. -$16.25

    C. -$5.25

    D. $5.25

14.

Evaluate the expression $-8 \times \dfrac{1}{4} \div \dfrac{-2}{3}$.

A. $\dfrac{1}{3}$

B. $\dfrac{3}{4}$

C. $1\dfrac{1}{3}$

D. 3

15. Frank lost 5 points for not completing his homework, 3 points for talking, and 2 points for chewing gum. This happened 4 days in a row. Which expression represents the amount of points Frank lost.

A. $5(4 + 3 + 2)$

B. $5(-4 \times (-3) \times (-2))$

C. $4(-5 + (-3) + (-2))$

D. $4(5 + 3 + 2)$

16.

Simplify $-\dfrac{15}{35} \times -7$.

A. $-7\dfrac{3}{7}$

B. -3

C. 3

D. $7\dfrac{3}{7}$

17. Vinny's Pizzeria made a profit of $485.00 today. They made a profit of $325.75 yesterday. The day before yesterday Vinny's had a profit of $450.75.

Part A: What was the average profit Vinny's made **each day**, over the last three days?

   Answer: _____

Part B: If Vinny's was only open for 10.5 hours **today**, how much profit did they earn **each hour**?

   Answer: _____

Part C: Justify **why** you believe your answer is correct for part B. Use correct math vocabulary.

_____
_____
_____
_____

18. Simplify the expression.

$$(4) \div (-2) + (-6)\left(\frac{-1}{6}\right)$$

   A. -3

   B. ⁻1

   C. 1

   D. 3

19. The Panthers lost 6 yards on their first play and lost another 8 yards on their next play. What was their net result in yards after these two plays?

   A. -14 yards

   B. -2 yards

   C. 2 yards

   D. 14 yards

20. The New York Giants' football team scored 4 touchdowns in their first game,

   3 in their second game and 7 in their third game. A touchdown is worth 6 points.

   Write an expression and determine how many points the team scored in all three games.

   Answer: _____

21. Simplify the expression.

   15.75 – (⁻3.85) + (⁻2.54)

   A. 9.36

   B. 9.56

   C. 14.44

   D. 17.06

22. The temperature on Sunday was 87⁰F. On Saturday the temperature was 4⁰F higher. On Friday the temperature was 7⁰F lower than on Saturday. What was the temperature on Friday?
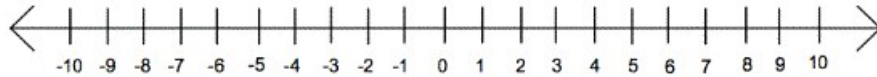
   A. 91⁰ F

   B. 84⁰ F

   C. 98⁰ F

   D. 83⁰ F

23. Consider the subtraction problem 7 - (-2).

Part A: Write the corresponding addition problem.

Answer: _____

Part B: Show 7 - (-2) on a number line.

-10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10

Part C: Describe a real-world situation that could be represented by 7 - (-2).

_____

_____

_____

24.

Mari bought $124\frac{7}{20}$ feet of fabric to make some curtains. What is the length of the fabric written as a decimal?

A.   124

B.   124.35

C.   124.4

D.   124.3

25. Which of the following is the correct solution to the problem below?

$$-\frac{9}{3}+\frac{-51}{17}$$

A.   1

B.   -3

C.   0

D.   -6

26.

Dylan got his math test back and saw a $-12\frac{1}{2}$ points on the top of his math test. The grade was 100% because he earned extra credit points. How much extra credit did Dylan receive on his math test?

A.   25 points

B.   –25 points

C. $12\frac{1}{2}$ points

D. $-12\frac{1}{2}$ points

27. A packaging plant uses a machine that can bottle 30 fluid ounces of shampoo in 12 seconds. How many fluid ounces of shampoo can be bottled per second?

A. $\frac{2}{5}$ fluid ounces

B.   19 fluid ounces

C. $2\frac{1}{2}$ fluid ounces

D.   360 fluid ounces

28. The graph shows the number of feet traveled by two cars over a period of time.

Rates of Speed of Two Cars
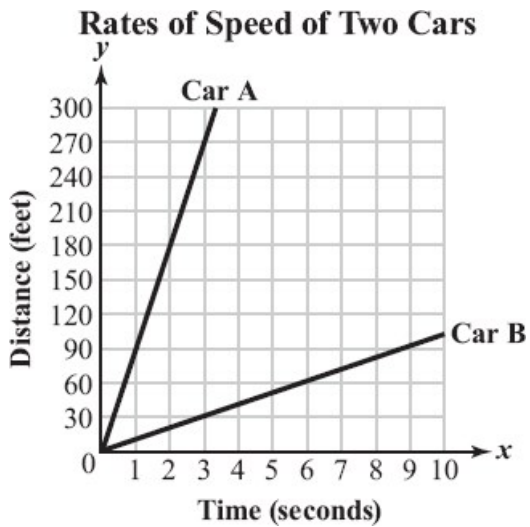
Which statement is true about the information presented in the graph?

A   Car B traveled at a unit rate of 30 feet per second.

B.   Car A traveled at a unit rate of 90 feet per second.

C.
Car A traveled at a unit rate of $\dfrac{1}{90}$ foot per second.

D.
Car B traveled at a unit rate of $\dfrac{1}{10}$ foot per second.

29. Last summer, a family took a trip to a beach that was about 200 miles away from their home. The graph below shows the distance driven, in miles, and the time, in hours, taken for the trip.
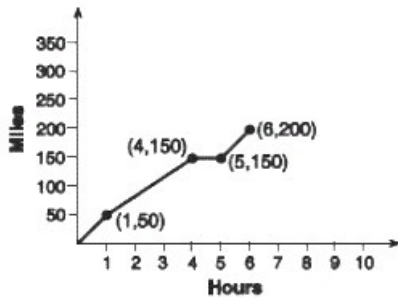
What was their average speed from hour 1 to hour 4?

A. 25 miles per hour

B.
$33\dfrac{1}{3}$ miles per hour

C.
$66\dfrac{2}{3}$ miles per hour

D. 100 miles per hour

30. A math tutor charges $30 for a consultation, and then $25 per hour.

   An online tutoring service charges $30 per hour.

   Part A: Does either service represent a proportional relationship between time and cost? Explain your reasoning and include equations representing the costs of both services in your explanation.

   _____

   _____

   _____

   _____

   _____

   Part B: Which service is a better deal for 4 hours of tutoring? Explain.

   _____

   _____

   _____

   _____

31.
   A recipe for applesauce calls for $\frac{1}{3}$ cup of honey. The recipe makes 8 servings. How many cups of honey are needed to make 20 servings?

   A. $\frac{5}{6}$ cup

   B. $1\frac{1}{6}$ cups

   C. $1\frac{1}{3}$ cups

   D. $2\frac{2}{3}$ cups

32. Kiran bought 6 yards of ribbon for $3.90. Which ratio is proportional to 6 yards at $3.90?

   A. $\dfrac{\$1.36}{2\,yards}$

   B. $\dfrac{\$1.92}{3\,yards}$

   C. $\dfrac{\$2.64}{4\,yards}$

   D. $\dfrac{\$3.25}{5\,yards}$

33. A packaging plant uses a machine that can bottle 30 fluid ounces of shampoo in 12 seconds. How many fluid ounces of shampoo can be bottled per second?

   A. $\dfrac{2}{5}$ fluid ounces

   B. 19 fluid ounces

   C. $2\dfrac{1}{2}$ fluid ounces

   D. 360 fluid ounces

34. The table below shows the cost of beads per pound.

Bead Cost

Beads (pounds)	Cost (dollars)
2	$6.00
3	$9.00
4	$12.00
5	$15.00
6	$18.00
7	$21.00

What is the constant of proportionality?

A. $6.00 per pound

B. $3.00 per pound

C. $2.00 per pound

D. $1.00 per pound

35. A pair of jeans that normally cost $50 is on sale this week for $30. What is the percent of change?

A. 4%

B. 50%

C. 30%

D. 40%

36. Match the proportion with its solution.

$$\frac{3}{2} = \frac{t}{18}$$

A. 27

B. 2

C. 5

D. $\frac{1}{3}$

37. Currently 31 out of every 50 American adults drink coffee every day. In a town with a population of 7,500 adults, how many of these adults would you expect to drink coffee every day?

   A. 2,325 adults

   B. 9,300 adults

   C. 4,650 adults

   D. 12,096 adults

38. Harriet paid $349.65 for 7 fruit trees. If each of the trees cost the same, what is the cost for one tree?

   A. $58.27

   B. $49.95

   C. $41.09

   D. $49.90

39. The table below shows the number of coils in different lengths of a spring. The spring next to the table shows an example of a 2 inch spring with 14 coils.

Number of Coils Based on the Length of the Spring

Length of Spring (in inches)	Number of Coils
2	14
4	28
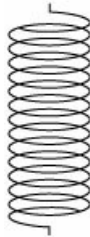
Which of these is in proportion to the ratio of the number of coils to the length of spring shown in the table?

   A. 1 coil in a spring that is 7 inches long

   B. 6 coils in a spring that is 42 inches long

   C. 56 coils in a spring that is 8 inches long

   D. 10 coils in a spring that is 70 inches long

40. A swimmer completes 8 laps in $\frac{1}{4}$ hour. What is the swimmer's rate per hour?

   A. 2 laps per hour

   B. 8 laps per hour

   C. 16 laps per hour

   D. 32 laps per hour

41. With the help of a conservation program, the number of lions in a wildlife preserve increased from 25 to 40 over a short period of time. What is the percentage increase in the number of lions? Round your answer to the nearest tenth of a percent.

A.   15%

B.   23.1%

C.   37.5%

D.   60%

42. The function table shows the relationship between the cost and the number of ham sandwiches purchased at a deli.

Cost, C (in dollars)	Number of Sandwiches, n
1	4
2	8
3	12
4	16
5	20

Which equation shows the relationship between the cost and the number of sandwiches purchased?

A. $C = n + 4$

B. $C = 4n$

C. $C = \frac{1}{4}n$

D. $C = 4n + 4$

43. The manager of a sporting goods store raises the price of a basketball from $16 to $18. What is the percent increase?

A.   1.25%

B.   2%

C.   11.1%

D.   12.5%

44. The length of a recycling cart is 1.5 yards.

1 yard = 3 feet

Part A

What is the length, in feet, of the recycling cart? *Show your work.*

_____ feet

Part B

Bret has a storage box that is the same height as the recycling cart. He finds that 3.2 times the length, in feet, of his storage box is equal to 1.6 times the length, in feet, of the recycling cart. Using a proportional relationship, what is the length, in feet, of the storage box?
Show your work.

_____ feet

Part C

The recycling cart and the storage box both have the same height. Determine whether or not the storage box would fit into the recycling cart if the width of the storage box is 2.5 feet, and the width of the recycling cart is 1 yard. *Show your work.*

Answer _____

45. Students must mix blue and yellow paint to make different shades of green. The shade of green will be the same if the ratio of blue paint to yellow paint remains the same. The table shows five different combinations used to make green paint.

Mixing Green Paint

Parts of Blue Paint	Parts of Yellow Paint
3	6
2	3
2	4
1	2
4	5
4	6

How many different shades of green paint are made by using the combinations shown in the table?

A. 1

B. 2

C. 3

D. 6

46. Write the ratio $28 to $34 as a fraction in simplest form.

A. $\$\dfrac{14}{17}$

B. $\$\dfrac{28}{17}$

C. $\$\dfrac{17}{28}$

D. $\$\dfrac{17}{14}$

47. If you can type 1080 words in 40 minutes, then how many words per minute can you type?

   A. 180 words/min

   B. 31 words/min

   C. 27 words/min

   D. 9 words/min

48. A shelf at a bookstore displays 27 books. Of these 27 books, 9 of the books are nonfiction books. The store owner adds 6 new fiction books to the shelf and wants the ratio of fiction books to nonfiction books to remain the same. What is the total number of nonfiction books that the store should display, after the new fiction books are added?

   A. 12

   B. 15

   C. 16

   D. 18

49. Determine whether the proportion $\frac{25}{5} = \frac{40}{8}$ is true.

   A. True

   B. False

50. Appliances at Discount City Store are on sale for 70% of the original price. Eli has a coupon for an 18% discount on the sale price. If the original price of a microwave oven is $500, how much will Eli pay for the oven before tax?
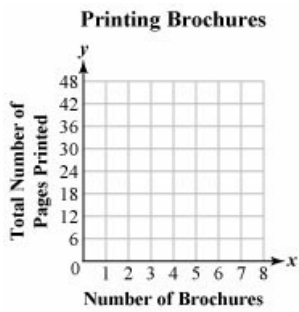
   A. $440

   B. $287

   C. $260

   D. $240

51. Julie runs $1\frac{1}{2}$ miles in $\frac{1}{3}$ hour. How many miles will she run per hour at the same speed?

   A. $\frac{1}{2}$ mile

   B. $1\frac{5}{6}$ miles

   C. $2\frac{1}{6}$ miles

   D. $4\frac{1}{2}$ miles

52. Part A

(1) A publisher prints a total of 12 pages for 2 brochures. Draw a line showing the proportional relationship between the number of pages the publisher prints, *y*, for *x* number of brochures.

Printing Brochures

(2) Sam says that the publisher will print 34 pages for 5 brochures. Plot this point on the graph above.

Part B

Based on the graph from Part A, explain why Sam is correct or incorrect.

Part C

How many pages are printed for 1 brochure? Explain how you arrived at your answer.

Part D

Write an equation to show the relationship between *x*, the number of brochures, and *y*, the number of pages printed.

Answer _____

53. Weights of different materials were taken for three lengths: 6 inches, 12 inches, and 18 inches.

Material 1	15	30	60
Material 2	13	26	39
Material 3	31	62	93
Material 4	14	28	42

Which of the materials' weights does NOT have a proportional relationship with length?

A. Material 1

B. Material 2

C. Material 3

D. Material 4

54. A recipe calls for 14 cups of flour and 6 cups of sugar. Will the two recipes be proportional if the recipe decreases to 7 cups of flour and 3 cups of sugar? Explain how you got your answer.

Show all work.

Answer: _____

_____

_____

_____

_____

55. Express the following as a proportion:

76 computers is to 190 students as 84 computers is to 210 students.

A. $\dfrac{76 computers}{190 students} = \dfrac{210 students}{84 computers}$

B. $\dfrac{76 computers}{210 students} = \dfrac{84 computers}{190 students}$

C. $\dfrac{190 students}{76 computers} = \dfrac{84 computers}{210 students}$

D. $\dfrac{76 computers}{190 students} = \dfrac{84 computers}{210 students}$