

**End of 6<sup>th</sup> Grade with Mrs. Mihaly and Mr. Lee,  
Entering 7<sup>th</sup> Grade  
Summer Assignment 2023**

**Due Date: Thursday September 7, 2023**

**Objective:** Students will practice and expand upon previously learned skills in preparation for more rigorous Grade 7 Content.

**Overview of Instructions:** Complete each problem in the space provided. In order to receive credit for this assignment, you must show work for each problem. NO CALCULATORS SHOULD BE USED. If necessary, you may work on a separate sheet of paper, but the additional pages with your work must be turned in with your assignment.

When you return in September, you are expected to hand in your completed Summer Math Packet by Thursday, September 7. On Tuesday, September 12, you will be given a quiz covering the topics from the Summer Math Packet.

**Grading:** Summer Math Packet – Due Thursday, September 7, 2023

Summer Math Packet Quiz - Tuesday, September 12, 2023

**Additional Resources:** The material is a review of grade 6 topics; the topics will not be re-taught in 7<sup>th</sup> grade. If you have difficulty with anything in the assignment, try searching the following sites for tutorials/videos/examples of problems: bigideasmath.com, khanacademy.com, coolmath.com, purplemath.com, math antics.com, mathwarehouse.com, etc. You can also Google it, of course! We encourage you to form study groups to work collaboratively with your peers to successfully complete the assignment.

*Please do not call the office for a copy of the summer assignment as they will not have one. The packet has been posted to the Summer Math Assignments 2023 Google Classroom as well as the HTS website.*

**See you in September!!**

\*\*\*\* Must show all work to get full credit \*\*\*\*

**Summer Assignment 2023**

1. A worker at a clothing store earns a 15% commission on a sale of \$75.00. How much is the commission?

**Write the ratio. Explain what the ratio means.**

2. bottles to cans



**Find the missing values in the ratio table. Then write the equivalent ratios.**

3.

<b>Trucks</b>	2		30
<b>Cars</b>	3	9	

4. There are 77 students in the student council. The ratio of girls to boys is 7 : 4. How many girls are in the student council? What is the ratio of girls to students?

5. Decide whether the following rates are equivalent. (Show all work for full credit)

12 pages in 20 minutes

20 pages in 32 minutes

6. You can buy an 8-pack of paper towels for \$7.92 or a 12-pack for \$11.64. Which is the better buy?

**Display the data in a graph.**

- 7.

<b>Input, <math>x</math></b>	0	2	4	6
<b>Output, <math>y</math></b>	0	2	4	6

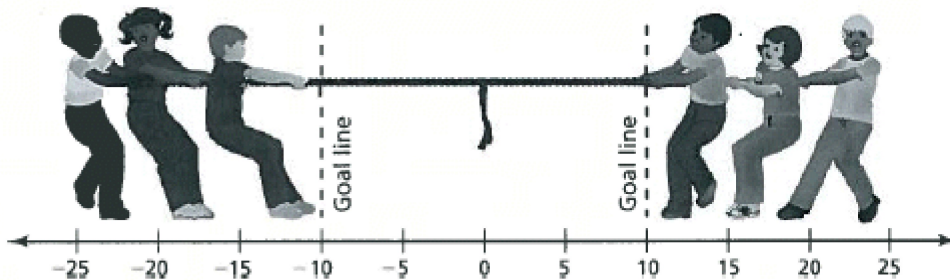
Name: \_\_\_\_\_

ID: A

\*\*\*\* Must show all work to get full credit \*\*\*\*

8. A point is reflected in the  $x$ -axis. The reflected point is  $(-9, -5)$ . What is the original point? What is the distance between the points?

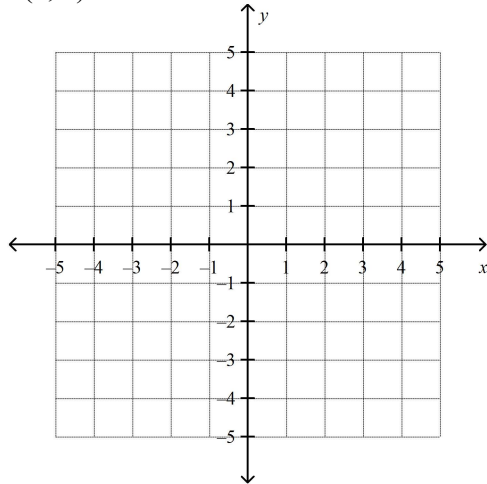
9. In a game of *tug-of-war*, a team wins by pulling the flag over their goal line. The flag begins at 0. During a game, the flag moves 4 feet to the left, 13 feet to the right, and 14 feet back to the left. Did a team win? Explain.



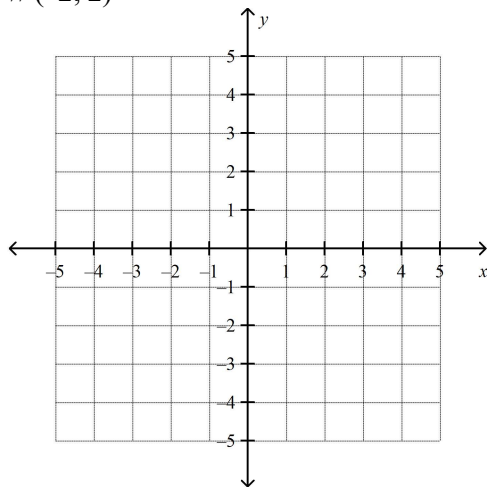
**\*\*\*\* Must show all work to get full credit \*\*\*\***

**For questions 10 - 12, plot the ordered pair in a coordinate plane. Describe the location of the point.**

10.  $S(4, 1)$



11.  $W(-2, 2)$



12. Name the ordered pair that is 4 units left and 4 units down from  $(0, -3)$ .

**Write the word sentence as an equation.**

13. Negative 20 equals 9 increased by one-fifth of a number  $g$ .
14. 29 added to the product of a number  $g$  and negative 14 equals 34.
15. 22 fewer than the quotient of a number  $x$  and negative 12 is 34.

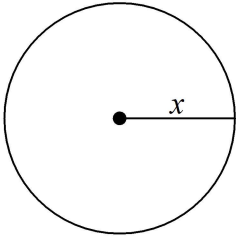
Name: \_\_\_\_\_

ID: A

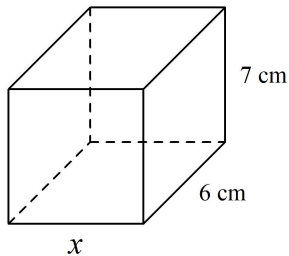
\*\*\*\* Must show all work to get full credit \*\*\*\*

**Write an equation that can be used to find the value of  $x$ .**

16. Circumference of circle:  $18\pi$  in.



17. Volume of rectangular prism:  $294 \text{ cm}^3$



18. How is an equal sign used in an equation?

19. Write a word sentence for the equation  
 $n \div 24 = 6$ .

**Tell whether the given value is a solution of the equation.**

20.  $b + 12 = 29$ ;  $b = 17$

21.  $37 - y = 7$ ;  $y = 30$

**Tell whether the given value is a solution of the inequality.**

22.  $x - 5 \leq 10$ ;  $x = 6$

23.  $y + 4 < 16$ ;  $y = 13$

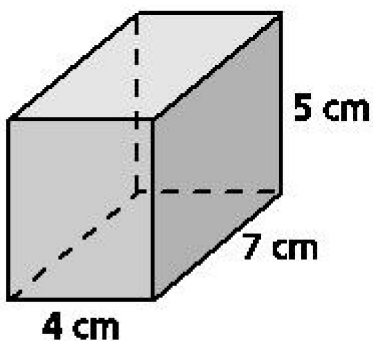
Name: \_\_\_\_\_

ID: A

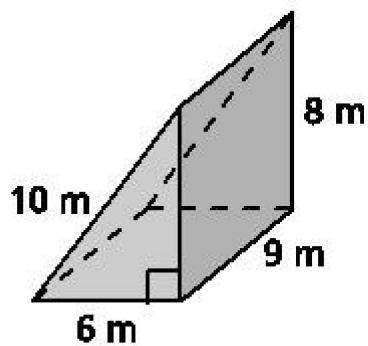
\*\*\*\* Must show all work to get full credit \*\*\*\*

Find the surface area of the prism.

24.

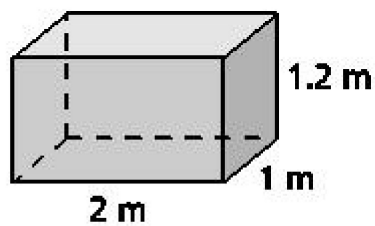


25.

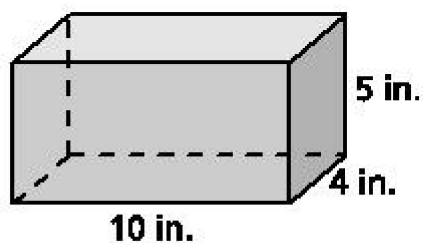


Find the volume of the prism.

26.

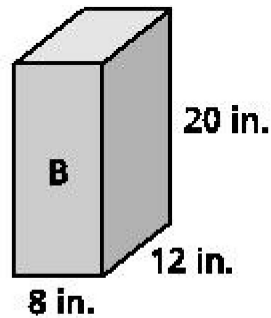
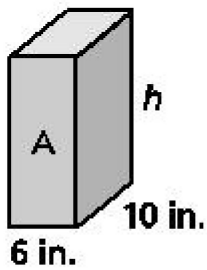


27.



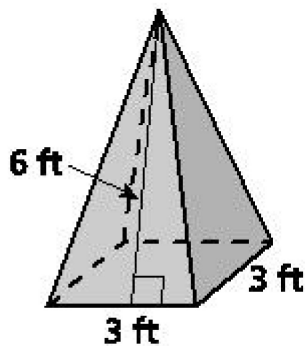
\*\*\*\* Must show all work to get full credit \*\*\*\*

28. Box B has twice the volume of box A. What is the height of box A?



Find the surface area of the pyramid. The side lengths of the base are equal.

29.



30. The surface area of a square pyramid is 136 square inches. The base length is 4 inches. What is the slant height?

31. The edges of a cube each measure 4 inches. What is the total volume, in cubic inches, of the cube?

32. A playhouse is in the shape of a square pyramid with a side length of 6 feet and a slant height of 12 feet. The wood used to build the walls of the playhouse costs \$3 per square foot. What is the cost of the wood for the walls of the playhouse?

Name: \_\_\_\_\_

ID: A

\*\*\*\* Must show all work to get full credit \*\*\*\*

**Find the mean, median, and mode(s) of the data.  
Choose the measure that best represents the  
data. Explain your reasoning.**

33. 12, 15, 16, 18, 20, 90

34. 66, 73, 66, 75, 80

35. 74, 67, 80, 82, 69, 84, 81, 63

**Find the median, first quartile, third quartile,  
and interquartile range of the data.**

36. 12, 31, 9, 20, 36, 5, 22

37. 63, 68, 58, 77, 50, 49, 63, 73

**For question 38 & 39, find and interpret the  
mean absolute deviation of the data. Round  
your answer to the nearest tenth, if necessary.**

38.

Time Spent Studying (hours)			
1	5	2	2
2	4	4	0

39.

Price of Blu-ray Players (dollars)			
60	105	80	125
140	95	65	170



\*\*\*\* Must show all work to get full credit \*\*\*\*

Use the stem-and-leaf plot below to answer questions 40 - 44.

The stem-and-leaf plot below shows the lengths (in inches) of some snakes.

Stem	Leaf
0	3
1	1 3 3
2	0 3 7 8
3	3
4	5 6 7 9

Key: 1 | 5 = 15

40. How many data values are in the set?

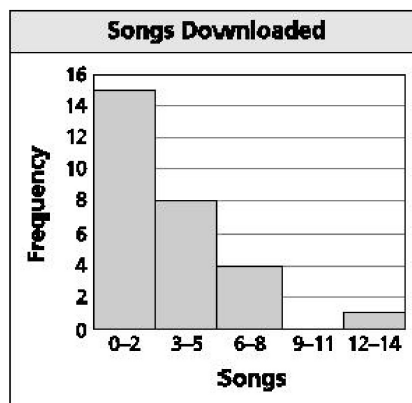
41. What is the median?

42. What is the range?

43. What is the interquartile range?

44. Which value occurs the most often?

Use the histogram that shows the numbers of songs downloaded per week by students in a class.



45. How many students are in the class?

46. What percent of the students downloaded fewer than 6 songs? Round to the nearest tenth.

\*\*\*\* Must show all work to get full credit \*\*\*\*

Make a stem-and-leaf plot of the data.

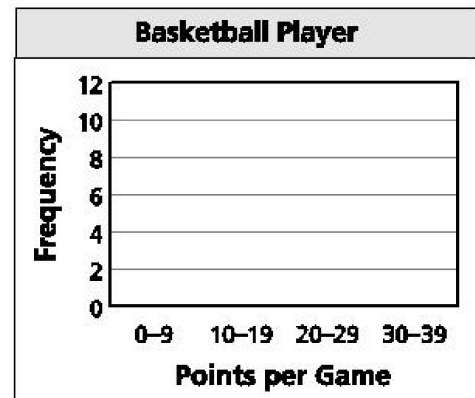
47.

Miles Driven per Day			
10	35	11	15
15	9	17	16
24	22	20	8

Display the data in a histogram.

48.

Basketball Player	
Points per Game	Frequency
0–9	6
10–19	10
20–29	3
30–39	2



For questions 49 - 51, evaluate the expression when  $x = 12$ ,  $y = -3$ , and  $z = -2$ .

49.  $x \div y$

50.  $\frac{4y^2}{z}$

\*\*\*\* Must show all work to get full credit \*\*\*\*

51.  $\left| \frac{xz}{-y} \right|$

For questions 52 - 56, evaluate.

52.  $7.21 - 2.6 \div 4^2$

53.  $-2\frac{1}{2} \times \frac{1}{3} - 3\frac{1}{4}$

54.  $\left(-\frac{1}{5}\right)^2 - \frac{1}{2} \left(1\frac{1}{5}\right)$

55.  $-7.7 + 1.7 \times (-1.7)$

56.  $-3.59 \bullet |-1.4| - 3.6^3$

57. The table shows four bank account transactions. Find the change in the account balance.

Transactions	
Deposit	\$85.00
Withdrawal	-\$40.00
Game Rentals	-\$65.00
Deposit	\$65.00

58. How many 0.5-pound packages can be made with 7 pounds of sunflower seeds?

59. A sign at a furniture store says "
- $\frac{1}{5}$
- off!". Another sign says "15% off!".
- Which sign would give you the better deal? Explain your reasoning.
  - How should the store manager change the signs so that they are consistent? Explain.
  - A customer wants to buy a table that is on clearance and is marked "70% off" before the additional " $\frac{1}{5}$  off". What is the total percent savings?

Name: \_\_\_\_\_

ID: A

\*\*\*\* Must show all work to get full credit \*\*\*\*

Write the rational number as a decimal.

60.  $-\frac{15}{16}$

61.  $1\frac{2}{3}$

62. You lose 3 quarters, 7 dimes, and 5 nickels.  
a. Write the amount as a decimal.  
b. Write the amount as a fraction in simplest form.

Evaluate the expression.

63.  $4\left(\frac{3}{7} \cdot \frac{3}{4}\right)$

64.  $\frac{1}{3} \cdot 16 \cdot \frac{1}{4}$

65.  $3\left(\frac{4}{5} \cdot \frac{2}{3}\right)$