

**End of 7th Grade with Mrs. Mihaly and Mr. Lee,
Entering 8th 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 Algebra 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 7 topics; the topics will not be re-taught in 8th 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. It costs \$145 for 10 people to attend a concert. How much does it cost a group of 8 people? (Show all work for full credit)

2. There are 25 computers in a math lab. There are 6 activity booklets for every 2 computers in the math lab. How many activity booklets are in the math lab? (Show all work for full credit)

Use the ratio table to find the unit rate with the specified units. Show all work for full credit

3. miles per gallon

Gallons	0	2	4	6
Miles	0	31	62	93

4. Cost per box

Boxes	3	6	9
Cost	\$3.60	\$7.20	\$10.80

Write and solve a proportion to answer the question.

5. 1.5 is what percent of 12?

6. 120% of 10 is what number?

Write the decimal as a percent.

7. 0.65

8. 0.003

9. You earned a 90% on a science test. You answered 18 questions correctly. How many questions were on the test?

Name: _____

ID: A

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

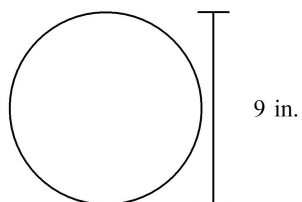
Write the percent as a decimal.

10. 73%

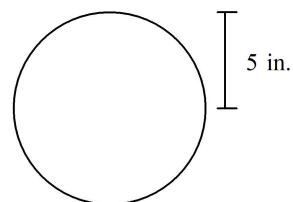
11. 32.3%

For questions 12 & 13, find the circumference of the circle. Use 3.14 or $\frac{22}{7}$ for π .

12.

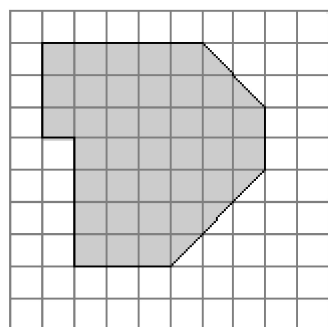


13.



For questions 12 & 13, find the area of the figure.

14.

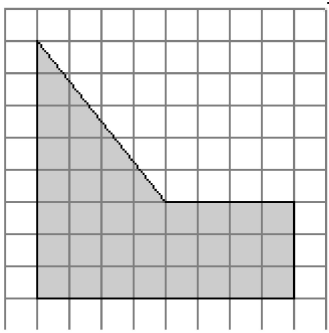


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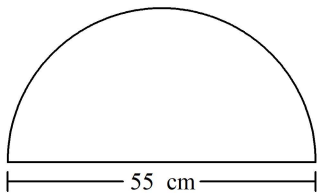
**** Must show all work to get full credit ****

15.

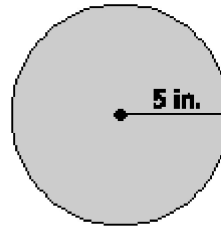


Find the area of the semicircle.

16.



17. What is the area, in square inches, of the circle below? Use 3.14 for π .



18. There are 64 cookies in a jar. The probability of randomly choosing an oatmeal cookie from the jar is 37.5%. How many of the cookies are *not* oatmeal cookies?

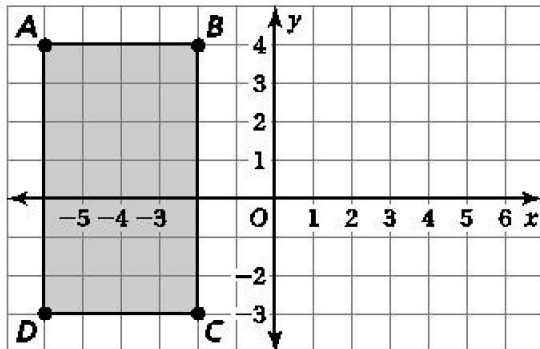
19. You roll a number cube and flip a coin. Find the probability of rolling a 3 and flipping tails.

Name: _____

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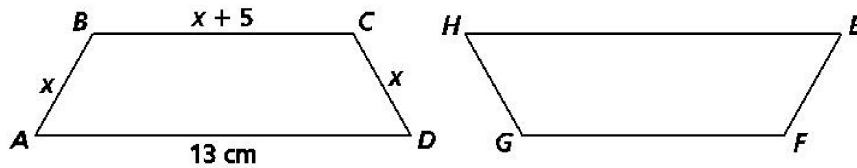
20. Rectangle $ABCD$ is graphed on the coordinate grid below.



Reflect Rectangle $ABCD$ over the y -axis. What is the x -coordinate of point A' ?

21. The scale on a map is 1 in. : 50 mi. The actual distance between two cities is 350 miles. What is the distance between the cities on the map?

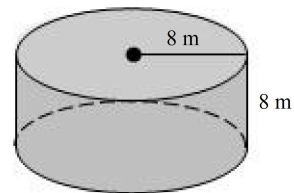
Trapezoids $ABCD$ and $EFGH$ are congruent.



22. What is the length of side GF ?

Find the surface area of the figure.

- 23.



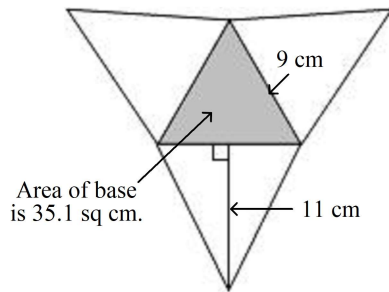
Name: _____

ID: A

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

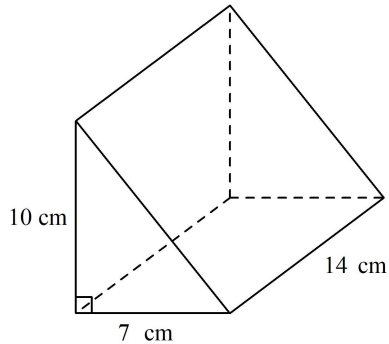
Use the net to find the surface area of the regular pyramid.

24.

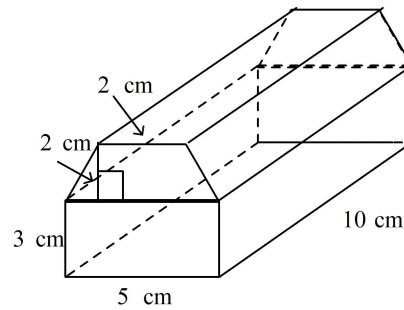


For questions 25 & 26, find the volume of the prism.

25.



26.



For questions 27 - 30, find the sum or difference.

27. $\frac{2}{3}(7w + 4) - \frac{1}{3}(2w - 1)$

28. $\frac{1}{2}(8 - 6y) + \frac{1}{5}(10y - 25)$

29. $\frac{1}{2}(8 - 6y) + \frac{1}{5}(10y - 25)$

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

30. $\frac{2}{3}(7w+4) - \frac{1}{3}(2w-1)$

35. $x + 4\frac{1}{3} = -2\frac{5}{6}$

For questions 31 - 35, solve the equation. Check your solution.**Write the word sentence as an equation. Then solve.**

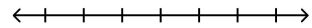
31. $-7 = \frac{z}{2} + 1$

36. The quotient of 5 plus a number d and negative 2 is 14.

32. $\frac{3}{5}m - \frac{1}{5}m + 12 = 5$

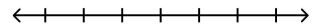
Solve the inequality. Graph the solution.

37. $x - \frac{4}{5} > \frac{1}{5}$



33. $\frac{1}{4}(n-6) = \frac{1}{4}n - \frac{3}{2}$

38. $\frac{1}{2} + x < 4$



34. $\frac{3}{4}g - \frac{1}{2}g + 15 = 9$

****** Must show all work to get full credit ********Write the word sentence as an inequality.**

39. A number
- b
- subtracted from 9.8 is greater than
- -4
- .

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

- 40.
- $x - 2 \geq -1.6$
- ;
- $x = 0.8$

- 41.
- $-\frac{2}{5}c < 9$
- ;
- $c = -25$

Solve the inequality.

- 42.
- $-\frac{7}{8}c \leq 35$

- 43.
- $-\frac{1}{4}(w - 5) \geq -2$

Tell whether the ratios form a proportion.

- 44.
- $\frac{4}{7}, \frac{24}{35}$

- 45.
- $\frac{11}{12}, \frac{33}{36}$

Solve the proportion.

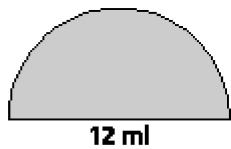
- 46.
- $\frac{3.6}{m} = \frac{1.2}{3.6}$

- 47.
- $\frac{16}{10} = \frac{n+2}{5}$

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

Find the perimeter of the figure.

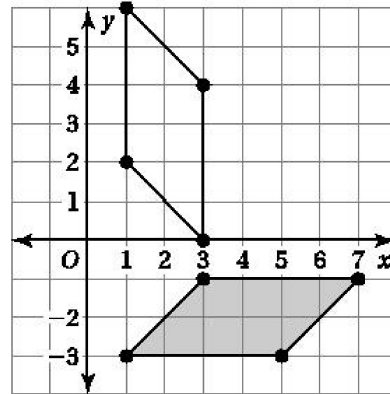
48.



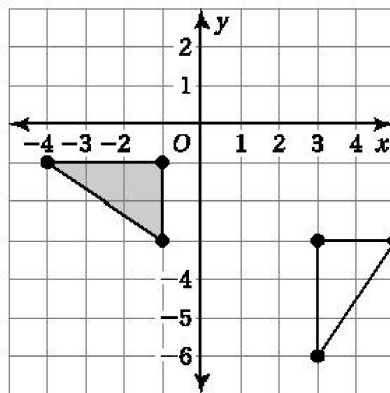
49. Reggie and Tanya are making their lunches for school. Each of them will randomly pick one piece of fruit from a basket in their kitchen. There are 2 apples and 3 oranges in the basket. What is the probability that both Reggie and Tanya will pick an apple? (Hint: Reggie will first pick a piece of fruit, and Tanya will then pick from what remains.)

The shaded figure is congruent to the nonshaded figure. Describe two different sequences of transformations in which the nonshaded figure is the image of the shaded figure.

50.

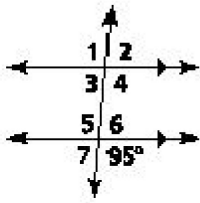


51.



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

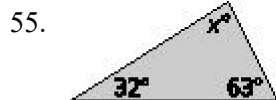
Use the figure to find the measure of the angle.
Explain your reasoning.



52. $\angle 3$

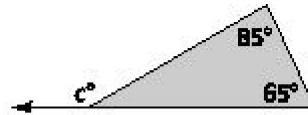
53. $\angle 5$

Find the measures of the interior angles.

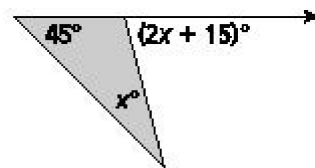


Find the measure of the exterior angle.

56.

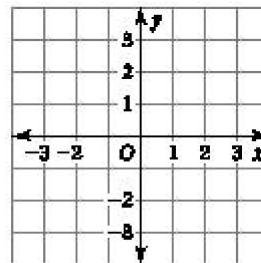


57.



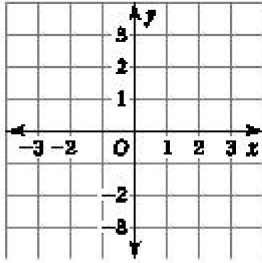
For questions 58 & 59, graph the linear equation.

58. $y = \frac{1}{2}x - 3$



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

59. $y = -\frac{x}{4} + 1$



Write in slope-intercept form an equation of the line that passes through the given points.

60. $(2, 5), (0, 1)$

61. $(-3, -1), (4, -1)$

For questions 62 & 63, find the slope and the y-intercept of the graph of the linear equation.

62. $y = \frac{1}{2}x - \frac{1}{3}$

63. $y = \frac{7}{9}x - 3\frac{1}{3}$

Write in point-slope form an equation of the line that passes through the given point and has the given slope.

64. $(1, 2); m = -2$

65. $(4, -2); m = \frac{1}{4}$