

NAME: _____ CLASS: _____

Welcome to 7th Grade Mathematics! This summer packet contains review material of the 6th grade concepts, skills, and procedures that should be mastered BEFORE entering 7th grade in September. The packet provides a review of the major 6th grade topics as well as a preview of 7th grade topics. The questions are based on the *Common Core State Learning Standards*. If you need a refresher on any of the problems encountered here in this packet, here are some websites you might find particularly useful:

- <http://www.khanacademy.org/>
- <http://www.ixl.com/math/>
- http://phschool.com/atschool/cmp2/program_page.html
- <http://www.studyisland.com/web/index/>

You will be responsible for handing in the completed packet with all work shown ON THE FIRST DAY OF SCHOOL. The problems here are very representative of the types of items you will need to have mastered BEFORE beginning 7th Grade Math... so you are strongly encouraged to include this packet in your summer festivities! Good luck and enjoy! ☺

DIRECTIONS: Show your work in the space provided after each question. Attach additional pages with work only if necessary. Write your final answers on the "ANSWER" lines. All work must be done in pencil. DO NOT use a calculator!

1. You drive a distance of 242 miles and use 11 gallons of gas. What is the average miles per gallon of your car?

ANSWER: _____

2. You get paid \$20 for 4 hours of work. What is your hourly rate?

ANSWER: _____

3. A volleyball team won 10 of its 16 games. What is the win-loss ratio?

ANSWER: _____

4. The adult - child ratio at a local daycare center is 3 to 16. At the same rate, how many adults are needed for 48 children?

ANSWER: _____

5. 17 out of 20 adults surveyed said they owned a cell phone. Represent the ratio 17 out of 20 as a percent.

ANSWER:_____

6. At a light bulb factory, 3 out of every 1,000 bulbs produced are defective. If 5,000 bulbs are produced, how many would you expect to be defective?

ANSWER:_____

7. Decide whether the pair of ratios form a proportion

$$\frac{15}{12} \stackrel{?}{=} \frac{4.5}{3.6}$$

ANSWER:_____

8. Solve the proportion $\frac{y}{10} = \frac{3}{5}$

ANSWER:_____

9. Which is a better buy, 14oz for 98¢ or 8oz for 64¢?

ANSWER:_____

10. Complete the ratio table below and then write the three new equivalent ratios.

72	36	24	12
126			

ANSWER:_____

11. Write 9% as a ratio.

ANSWER:_____

12. A fruit bowl contains 3 apples, 2 bananas, and 5 pears. What is the ratio of pears to apples?

ANSWER:_____

13. 4 students equally share $\frac{3}{4}$ of a pizza. How much of the pizza does each student get?

ANSWER:_____

14. What is the area of a rectangular parcel of land that is $\frac{7}{8}$ mile by $1\frac{1}{2}$ miles?

ANSWER:_____

QUESTIONS 15 – 17 INTENTIONALLY OMITTED

Find the sum, difference, product or quotient. Show all work.

18. $37.65 - 4.238$

ANSWER:_____

19. $297.57 \div 6.5$

ANSWER:_____

20. $74,404 \div 356$

ANSWER:_____

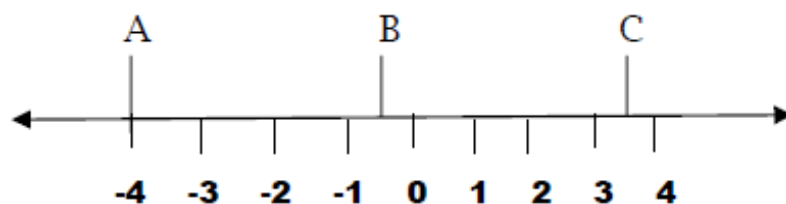
21. $417 + 37.95$

ANSWER:_____

22. 12.08×35.2

ANSWER:_____

23. Give the number for the location of points A, B and C on the number line.



ANSWER: A_____ B_____ C_____

Find the sum, difference, product or quotient. Show all work.

24. $2\frac{1}{2} - \frac{7}{8} =$

ANSWER:_____

25. $4\frac{3}{6} \times \frac{1}{9} =$

ANSWER:_____

26. $5 \div \frac{3}{10} =$

ANSWER:_____

27. $\frac{5}{6} \div 12 =$

ANSWER:_____

28. What is $\frac{2}{3}$ of 120?

ANSWER:_____

29. Simplify $3^3 \div 9 + 15 \times 4$

ANSWER:_____

30. Evaluate for $x = 7$ $4x + 17$

ANSWER:_____

31. Solve $x - 10 = 23$

ANSWER:_____

32. Simplify $48 - 2 \times 4^2 \div 8 + 13$

ANSWER:_____

33. Write an algebraic expression for “a number p increased by 7”

ANSWER:_____

34. Write an expression equal to $x + x + x + x$

ANSWER:_____

35. Use the distributive property to write an equivalent expression for $4(x - 2)$.

ANSWER:_____

36. Jack has \$25 to spend at the mall. Write an inequality that expresses symbolically the amount of money, m , that Jack can spend.

ANSWER:_____

37. *Princess Maria's* carriage travels at 4 miles per hour. Write an equation to find out how many hours a 48 mile trip will take at that rate. Solve the equation.

ANSWER:_____

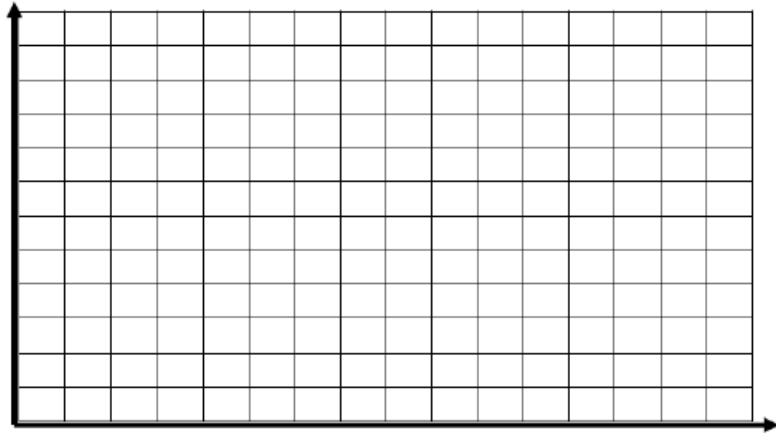
38. Find the width of a rectangle with a length of 18cm and an area of 72cm^2 .

ANSWER:_____

39. Laura has pledges of \$5 for each mile she walks in the Juvenile Diabetes Walkathon fundraiser.

- Use the table below to record the miles walked and the money earned for miles 0 through 6.
- Graph the data on the grid. Remember to select a scale and label the graph.
- Write a rule relating miles walked to money collected.

Miles Money



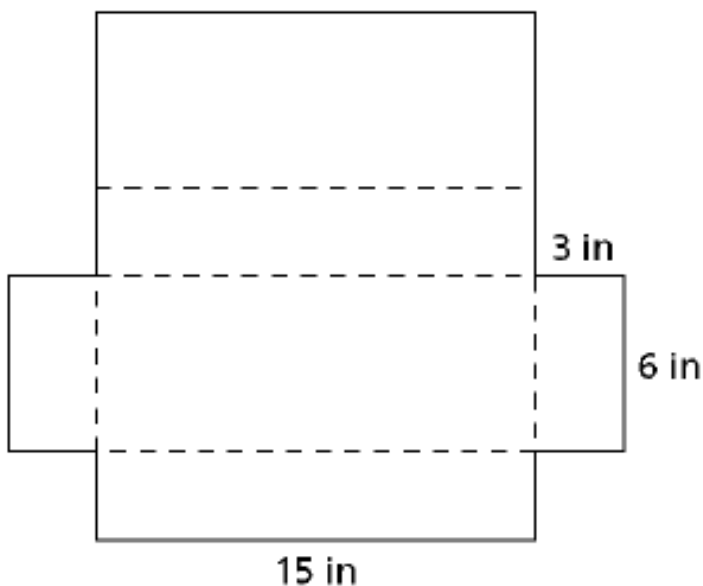
40. This net can be folded on the dashed lines to make a box.

a. What is the surface area of the box?

ANSWER (a): _____

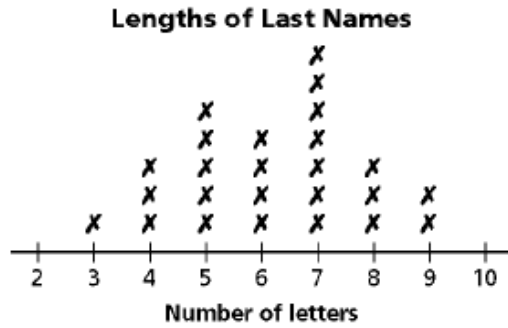
b. What is the volume of the box?

ANSWER (b): _____

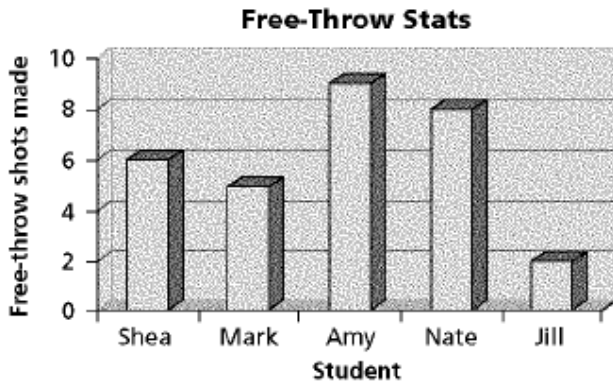


46. For the distribution pictured below, tell how many people are represented by the data, and identify the mode, median, and range.

Number of people represented _____ mode _____ median _____ range _____



47. Five students competed in a free throw contest. The number of free-throws out of 10 each student made is charted below. Based on the chart below, which of the following statements is false?



CIRCLE YOUR ANSWER.

- A. Amy made more free throws than Shea or Jill.
- B. Mark made more free throws than Jill.
- C. Nate made the most free throws.
- D. Shea made less free throws than Nate and Amy.

48. Mike was in charge of collecting contributions for the Food Bank. He received contributions of \$13, \$34, \$26, \$31 and \$28 from five co-workers. Find the median value of these contributions.

ANSWER: _____

49. Thirteen bowlers were asked what their score was on their last game. The scores are shown below.

190, 154, 150, 194, 182, 170, 190, 151, 190, 170, 178, 161, 180

Find the range of the bowlers' scores.

ANSWER: _____