

# Keansburg School District



Summer Mathematics Review of 6<sup>th</sup>  
Grade Standards for Students  
Entering 7<sup>th</sup> Grade

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

Teacher: \_\_\_\_\_

# Keansburg School District

## Summer Course Work

### Review for 7<sup>th</sup> Grade

- **Ratios and Proportional Relationships**

Understand ratio concepts and use ratio reasoning to solve problems.

- **The Number System**

Apply and extend previous understandings of multiplication and division to divide fractions by fractions.

Multiply and divide multi-digit numbers and find common factors and multiples.

Apply and extend previous understandings of numbers to the system of rational numbers.

- **Expressions and Equations**

Apply and extend previous understandings of arithmetic to algebraic expressions.

Reason about and solve one-variable equations and inequalities.

Represent and analyze quantitative relationships between dependent and independent variables.

- **Geometry**

Solve real-world and mathematical problems involving area, surface area, and volume.

- **Statistics and Probability**

Develop understanding of statistical variability.

Summarize and describe distributions.

## **Mathematical Practices**

Make sense of problems and persevere in solving them.

Reason abstractly and quantitatively.

Construct viable arguments and critique the reasoning of others.

Model with mathematics.

Use appropriate tools strategically.

Attend to precision.

Look for and make use of structure.

Look for and express regularity in repeated reasoning.

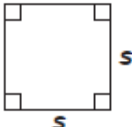
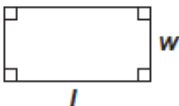
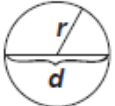
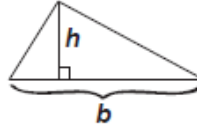
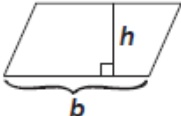
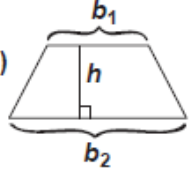
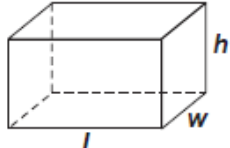
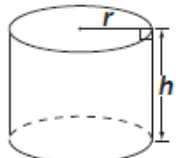
# Reference Sheet

The sum of the measures of the interior angles of a triangle =  $180^\circ$

Distance = rate  $\times$  time

**Simple Interest Formula:**  $A = P + Prt$

$A$  = amount after  $t$  years;  $P$  = principal;  $r$  = annual interest rate;  $t$  = number of years

$\pi \approx 3.14$ or $\frac{22}{7}$	<b>Square</b> Area = $s^2$ Perimeter = $4s$ 	<b>Rectangle</b> Area = $lw$ Perimeter = $2l + 2w$ 
<b>Circle</b> Area = $\pi r^2$ Circumference = $2\pi r$ = $\pi d$ 	<b>Triangle</b> Area = $\frac{1}{2}bh$ 	<b>Parallelogram</b> Area = $bh$ 
<b>Trapezoid</b> Area = $\frac{1}{2}h(b_1 + b_2)$ 	<b>Rectangular Prism</b> Volume = $lwh$ Surface Area = $2lw + 2wh + 2lh$ 	<b>Cylinder</b> Volume = $\pi r^2h$ Surface Area = $2\pi rh + 2\pi r^2$ 

## USE THE FOLLOWING EQUIVALENTS FOR YOUR CALCULATIONS

60 seconds = 1 minute 60 minutes = 1 hour 24 hours = 1 day 7 days = 1 week 12 months = 1 year 365 days = 1 year	12 inches = 1 foot 3 feet = 1 yard 36 inches = 1 yard 5,280 feet = 1 mile 1,760 yards = 1 mile	10 millimeters = 1 centimeter 100 centimeters = 1 meter 10 decimeters = 1 meter 1000 meters = 1 kilometer
8 fluid ounces = 1 cup 2 cups = 1 pint 2 pints = 1 quart 4 quarts = 1 gallon  1000 milliliters (mL) = 1 liter (L)	16 ounces = 1 pound 2,000 pounds = 1 ton  1000 milligrams = 1 gram 100 centigrams = 1 gram 10 grams = 1 dekagram 1000 grams = 1 kilogram	

# 7<sup>th</sup> Grade Math Summer Packet

**This packet is to be completed WITHOUT the use of a calculator. Show all work for each question in order to receive full credit.**

1. Order the numbers from least to greatest.  
0.0034, 0.112, 0.00343, 0.0035, 0.02

2. Subtract.  
 $927.25 - 20.8$

3. Divide.  
 $8.6 \div 0.2$

4. Add.  
 $5.6 + 7.29$

5. Multiply.  
 $0.43 \times 0.06$

6. What is the place value of the 3 in the number 491.53?

7. Add.  
 $\frac{1}{3} + \frac{2}{5}$

8. Subtract.

$$\frac{7}{9} - \frac{2}{3}$$

9. Multiply.

$$\frac{4}{5} \times \frac{1}{2}$$

10. Divide.

$$\frac{6}{7} \div \frac{3}{14}$$

11. Add.

$$1\frac{2}{5} + 3\frac{2}{7}$$

12. Subtract.

$$5\frac{1}{4} - 3\frac{3}{4}$$

13. Multiply.

$$6\frac{2}{3} \times 3\frac{1}{4}$$

14. Divide.

$$2\frac{1}{5} \div 1\frac{4}{7}$$

15. Evaluate  $x + 7$ , when  $x = 8$ .

16. Evaluate  $w \div 4$ , when  $w = -24$ .

17. If it took 7 hours to mow 4 lawns, how many lawns could be mowed in 35 hours?

18. 12 inches are equal to one foot. How many inches are in 5 feet?

19. What is 30 percent written as a fraction in lowest terms?

20. What is 15 percent of 200?

21. If we pay \$60 for 15 hamburgers, how much did we pay per hamburger?

22. The ratio of wings to beaks in the bird house at the zoo was 2:1. How many wings were there if there are 80 beaks?

23. How much chocolate will each person get if 3 people share  $\frac{1}{2}$  lb of chocolate equally?

24. How many  $\frac{3}{4}$  cup servings are in  $\frac{2}{3}$  of a cup of yogurt?

25. How wide is a rectangular piece of land with length  $\frac{3}{4}$  mile and area  $\frac{1}{2}$  square mile?

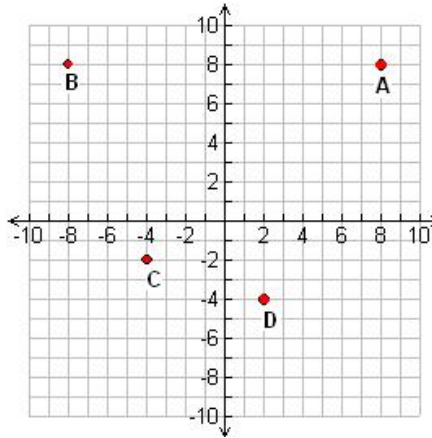
26. Tony wants to make gift baskets with oatmeal cookies and chocolate chip cookies. What is the greatest number of identical gift baskets he can make if he has 24 oatmeal cookies and 80 chocolate chip cookies?

27. Sally and her dad are running around a track. Sally can run one lap in 4 minutes, her dad can run one lap in 5 minutes. How many minutes will it take for them to meet at the starting line again?

28. Which quadrant is the point (3, -2) in?



29. Identify the ordered pairs for points A, B, C, and D below:



30. Evaluate  $5 + (10 - 3^2)$

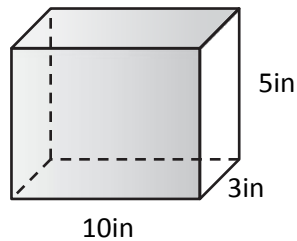
31. Write an expression for the phrase "5 less than  $x$ "

32. What is the volume of a rectangular prism with a length of 10cm, a width of 6 cm, and a height of 2 cm?

33. Bobby needs a grade higher than 85 on his next quiz in order to have an "A" average in Science. Write this situation using a variable and an inequality symbol ( $<$ ,  $>$ ,  $\leq$ ,  $\geq$ )

34. If the value of  $x$  is less than 5, give three different numbers  $x$  could represent.

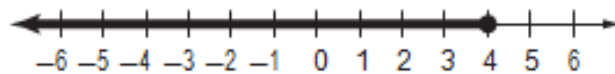
35. What is the combined area of all the sides of this box (also called Surface Area)? Your answer should be in square inches.



36. Complete the table.

<b>x</b>	<b>3x+2</b>
1	5
2	
3	
4	
5	

37. Write the inequality that is shown on the number line.



38. A cooler contains 3 grape, 5 apple, and 4 orange cans of juice. If you randomly choose 1, what is the probability that it is orange? Write your answer as a fraction in lowest terms.

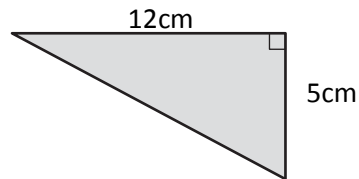
39. Solve for x.

$$x + 5 = 12$$

40. Solve for  $y$ .

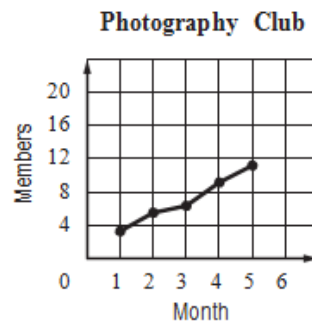
$$y - 6 = 22$$

41. What is the area of the triangle below?



42. Emily made 15 out of 20 shots during basketball practice. What percent of her shots did she miss?

43. Based on the line graph below, predict how many members will be in the Photography Club in the 6<sup>th</sup> month.



44. Which operation should be performed first in the expression below?

$$5 + 3^2 - 4(9 - 3) \div 6$$

45. Sarah wants to buy tile for her bathroom. The bathroom floor is a rectangle with a width of 6 feet and a length of 10 feet. If each tile is 1 square foot, how many tiles will she need?

46. Solve for x.

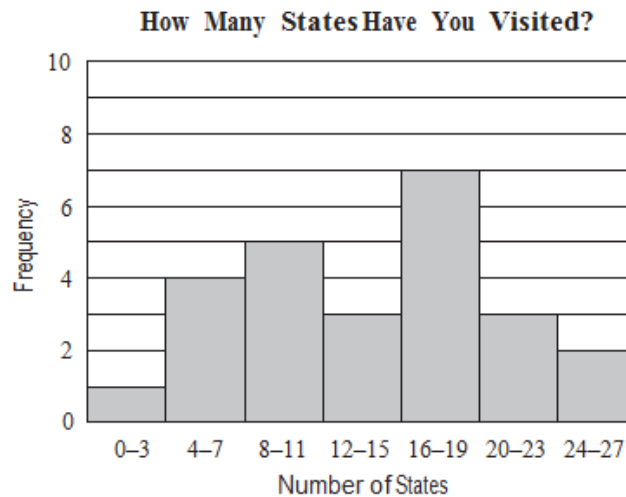
$$3x = 18$$

47. Solve for y.

$$\frac{y}{10} = 4$$

48. What is the volume of a rectangular prism with a length of 5cm, a width of 4cm, and a height of 6cm?

49. According to the histogram below, how many students visited 16 or more states?



50. What percent is modeled by the grid below?

