

SAINT JOHN PAUL II CATHOLIC ACADEMY

Entering Grade 7 Summer Math

2018

In Grade 6 You Learned To:

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.

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<p>Evaluate each expression for n=2, m=3, and t=5</p> <p>$3t - 4n =$</p> <p>$13 - (m+n) =$</p> <p>$4.7 + mt =$</p> <p>Compare. Write <, =, or ></p> <p>$-7 \underline{\quad} 7$</p> <p>$32 \underline{\quad} (-32)$</p> <p>$(-9) \underline{\quad} -3$</p> <p>$(-8) \underline{\quad} (-6)$</p>	<p>Simplify each expression</p> <p>$-6 + 4 =$</p> <p>$15 - (-8) =$</p> <p>$-4 + (-5) =$</p> <p>Solve each equation</p> <p>$X - 6 = -15$</p> <p>$1.5 = m - 3.2$</p> <p>$-12 = m + 8$</p>	<p>Read and complete...</p> <p>A teacher asks 15 students to estimate an answer to a question. The answers are 1, 5, 5, 6, 7, 8, 10, 12. The correct estimate is 7. The teacher wants to calculate how far off the estimates were by finding the absolute value of the difference between each estimate and the answer. Which estimate was off by the most?</p> <p>Drew sold lemonade and apples at the school fair. He sold a total of \$64. If he sold \$21 in lemonade, how many dollars worth of apples did he sell?</p>	<p>Use the Distributive Property to find each total cost.</p> <p>3 loaves of bread at \$1.99 each</p> <p>4 bags of berries at \$1.98 each</p> <p>6 cans of tuna at \$.97 each</p> <p>5 boxes of rice at \$2.95</p>	<p>Write and solve an equation for each situation.</p> <p>Nina buys lunch for herself and her sister. She pays \$7.50. Nina has \$5.25 left over. How much money did she begin with?</p> <p>A group of twelve volunteers raises \$144 for three charities. Each charity gets the same amount. How much does each charity get?</p>
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Find the GCF of each pair of numbers using prime factorization.	Write each fraction in simplest form.	Write each decimal as a mixed number or fraction in simplest form.	Solve each equation	Word Problems
9, 33	20/25	0.45	$\frac{4}{9} = 5\frac{1}{3}$	Two frogs hop around a circular track that is 60 inches around. First the larger frog jumps 13 in. and then the smaller frog jumps 11 in. If they take turns jumping, how many inches from the start will they be when they once again are at the same point?
22, 121	-9/42		x -	
7, 15	7/77	12.2	$\frac{2}{3} = 4\frac{1}{5}$	
17, 51	36/63		c -	
6, 24	40/48	8.6	$16 = n \frac{3}{4}$ +	
			$y \times \frac{1}{8} = 1\frac{7}{8}$	

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Word problems	Find the reciprocal of each fraction or whole number	Simplify the following expressions.	Find each quotient. Simplify, if possible	Solve each equation
<p>One-half of a watermelon was shared among 4 people. How much watermelon did each person get?</p> <p>$\frac{1}{4}$ A recipe for cookies calls for cup of almonds. If Sara has $1\frac{1}{2}$ cups of almonds, how many recipes of cookies can she make?</p>	<p>$\frac{3}{5}$</p> <p>$\frac{4}{9}$</p> <p>$\frac{1}{6}$</p> <p>5</p>	<p>$2 + (10 \frac{6}{3}) -$</p> <p>$5(6 + 3)$</p> <p>$\frac{10}{(25 - 5)}$</p> <p>$12 + 2(6 - 2) \times 4^2$</p>	<p>$6 \div \frac{2}{3}$</p> <p>$12 \div \frac{3}{8}$</p> <p>$9 \div \frac{3}{5}$</p> <p>$12 \div \frac{1}{3}$</p>	<p>$35s = 10.5$</p> <p>$m + 3.5 = 4.2$</p> <p>$270 = 2.7x$</p> <p>$9.6 = 1.6y$</p> <p>$8y = 5.6$</p>

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<p>Solve each equation</p> <p>$6n + 3 = 21$</p> <p>$-10 = 2 + 6w$</p> <p>$5d + 10 = 25$</p> <p>$7g + 3 = 10$</p>	<p>Define the following terms;</p> <p>Distributive Property:</p> <p>Coefficient:</p> <p>Reciprocal:</p> <p>Common factor:</p>	<p>Define the following terms;</p> <p>Inequality:</p> <p>Area:</p> <p>Estimate:</p> <p>Average:</p>	<p>Define the following terms;</p> <p>Least Common Multiple:</p> <p>Integer:</p> <p>Factor:</p> <p>Absolute Value:</p>	<p>Define the following terms;</p> <p>Divisor:</p> <p>Linear Equation:</p> <p>Median:</p> <p>Mass:</p>
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<p>The ratio of the quantities of sugar and flour needed to bake a cake is 2:5. What is the quantity of sugar needed for a cake, if 750 grams of flour are used to bake it?</p> <p>A school cafeteria spent \$2,700 for ingredients necessary to prepare 450 meals. What is the rate spent per meal?</p> <p>A school has 300 students and 30 teachers. What is the ratio between the number of teachers and the number of students of the school?</p>	<p>If it takes a company 4 hours to build 1,300 cell phones, at the same rate it will take the company ____ Hours to build 39,000 cell phones.</p> <p>A family went out to dinner and the cost of the food was \$80. If the tip given was 15%, what was the total cost?</p> <p>The rents of apartments in a building are proportional to the areas rented, per the table below:</p> <table border="1" data-bbox="478 763 938 1109"> <thead> <tr> <th>Apartment</th> <th>Area(square meters)</th> <th>Rent(\$)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>100</td> <td>600</td> </tr> <tr> <td>2</td> <td>120</td> <td>720</td> </tr> <tr> <td>3</td> <td>125</td> <td>x</td> </tr> <tr> <td>4</td> <td>140</td> <td>840</td> </tr> </tbody> </table> <p>What is the rent x of the apartment 3 in the table above?</p>	Apartment	Area(square meters)	Rent(\$)	1	100	600	2	120	720	3	125	x	4	140	840	<p>Find each sum or difference.</p> <p>$-8 + 13 =$</p> <p>$-77 + (-46) =$</p> <p>$50 - 82 =$</p> <p>$11 + (-19) =$</p> <p>$12 - 34 =$</p>	<p>Complete</p> <p>$5 \times 5 =$</p> <p>$7 \times 9 =$</p> <p>$9 \times 7 =$</p> <p>$10 \times 14 =$</p> <p>$22 \times 20 =$</p> <p>$25 \times 8 =$</p> <p>$66 \times 9 =$</p> <p>$33 \times 6 =$</p> <p>$74 \times 34 =$</p>	<p>Complete</p> <p>$48 \times 5 =$</p> <p>$38 \times 9 =$</p> <p>$69 \times 7 =$</p> <p>$15 \times 14 =$</p> <p>$333 \times 20 =$</p> <p>$587 \times 22 =$</p> <p>$784 \times 9 =$</p> <p>$31 \times 9 =$</p> <p>$774 \times 3 =$</p>
Apartment	Area(square meters)	Rent(\$)																	
1	100	600																	
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<p>Use < or > to compare</p> <p> 47 -36 </p> <p> -55 -27 </p> <p>41 -42.3 </p> <p>Order the values from least to greatest</p> <p> -14 , -8 , 21 , 3 </p> <p> -99 , 0 , -62 , 98.05 </p>	<p>Find each product or quotient. Write in simplest form.</p> <p>$2/5 \times 5/9 =$</p> <p>$7/8 \times 2 =$</p> <p>$4/5 \times 1/5 =$</p>	<p>Word Problems....</p> <p>Two teams of students earned money by washing cars. Team 1 washed 19 cars at \$4.25 each. Team 2 washed 17 cars for a total of \$82.50. Which team earned more money? By how much?</p> <p>Adam is training for a race. For every 3 minutes he runs, he walks for 4 minutes. Yesterday, he ran for 27 minutes. How many minutes did he walk?</p>	<p>Word Problems...</p> <p>Sue picked 5.8 pounds of apples. She gave some apples to Nancy. Now sue has 3.7 pounds of apples. Write an equation with n representing the apples Sue gave to Nancy. Then solve to find n.</p> <p>Mia works 8 hours a day. She has worked 4.6 hours so far today. Write an equation to represent her workday so far. Let h represent hours left to work. Then solve for h.</p>	<p>Find the mean, median and the mode for each set of data.</p> <p>(99, 88, 88, 92, 100)</p> <p>(30, 22, 38, 41, 33, 41, 30, 24)</p>
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<p>Evaluate each expression.</p> <p>$35 - 3 + 8 =$</p> <p>$29 - 3(9 - 4) =$</p>	<p>Write a verbal expression for each algebraic expression.</p> <p>$14 - 9C$</p> <hr/> <hr/> <hr/>	<p>Find the value of each expression.</p> <p>$5.65 - 3.08 =$</p> <p>$1 \frac{1}{12} + 3 \frac{2}{3} =$</p> <p>$4.85 (2.72) =$</p>	<p>Name the property used in each step.</p> <p>$2 \times 3 + (4 \times 2 - 8)$</p> <p>Became: $2 \times 3 + (8 - 8)$</p> <hr/> <p>Became: $= 2 \times 3 + (0)$</p> <hr/> <p>Became: $= 6 + 0$</p> <hr/>	<p>Complete</p> <p>$648 \times 15 =$</p> <p>$398 \times 29 =$</p> <p>$369 \times 7 =$</p> <p>$1551 \times 14 =$</p>

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<p>Find the value of x. Then name the property used.</p>	<p>Properties and Operations</p>	<p>Define.....</p>	<p>Complete.....</p>	<p>Complete.....</p>
<p>$8 = 8 + x$</p>	<p>Applying Properties Write the sum. Change the order of the addends. $2 + 5 =$ ____ + ____ = ____</p>	<p>Line:</p>	<p>$432 \times 6 =$</p>	<p>$123 \times 7 =$</p>
<p>$10x = 10$</p>	<p>Using inverse operations Find the number that makes both sentences true.</p>	<p>Integers:</p>	<p>$657 \times 14 =$</p>	<p>$914 \times 14 =$</p>
<p>$X + 0 = 5$</p>	<p>____ $\times 6 = 42$</p>	<p>Interval:</p>	<p>$951 \times 2 =$</p>	<p>$224 \times 20 =$</p>
<p>$5 + 1/5 = x$</p>	<p>Equations and Expressions Finding Missing Numbers</p>	<p>Liter:</p>	<p>$258 \times 12 =$</p>	<p>$652 \times 32 =$</p>
	<p>$7 + 5 = 9 +$ ____</p>		<p>$352 \times 9 =$</p>	<p>$78 \times 8 =$</p>
	<p>Solve Equations $m + 41 = 95$</p>		<p>$32 \times 8 =$</p>	<p>$33 \times 5 =$</p>

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<p>Choose the term that best complete each sentences.</p>	<p>Write an algebraic expression for each word phrase.</p>	<p>Match each word phrase with an expression.</p>	<p>Write <, >, or =</p>	<p>Multiple Choice.....</p>
<p>An arrangement in which order is important is called a (combination – permutation)</p> <p>A (parameter – statistic) is a measure that describes the characteristic of a sample.</p>	<p>13 less than a number q</p> <p>Number of day in w weeks</p>	<p>There are two fewer guests. _____</p> <p>There are half as many ears. ____</p> <p>There are two more books. _____ a. $m + 2$ b. n divided by 2 c. $p - 2$</p>	<p>-12 ____ (12)</p> <p>(-19) ____ -7</p> <p>3 ____ (-4)</p> <p>(6) ____ (-9)</p>	<p>Which integer is greater than -6 and less than -3?</p> <p>A. 4 B. -2 C. -5 D. -7</p> <p>Kyle’s family drove 40.8 miles east to visit his grandmother, and then 5.2 miles farther east to a restaurant. His family then drove west to return home. How many miles did his family travel in all?</p>

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Ratios	Complete.....	Complete.....	Open - ended...	Writing in Math.....
<p>Tye is making some trail mix based on a recipe that combines 2 cups of nuts with 3 cups of granola. If Tye has 6 cups of nuts, how many cups of granola should he use?</p> <p>Angela is helping her father paint a fence. She can paint 3 sections of the fence in 25 minutes. How many minutes will it take Angela to paint 12 sections of this fence?</p>	<p>662 x 6 =</p> <p>314 x 4 =</p> <p>523 x 2 =</p> <p>256 x 5 =</p> <p>111 x 7 =</p> <p>374 x 9 =</p>	<p>987 x 5 =</p> <p>654 x 14 =</p> <p>369 x 2 =</p> <p>258 x 12 =</p> <p>147x 9 =</p> <p>369 x 8 =</p>	<p>Write an integer that is greater than 10 and less than (-15).</p>	<p>Suppose a and b are integers, and $(a) > (b)$. Must a be greater than b? Use examples to support your answer.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

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Write 3 ratios that are equivalent to the given ratio. 12/21 1 : 3 6 to 8 5 to 5 12 : 60 25/15	Number Sense.... Which is greater. -5 (x) or 5 (-x)?	Write an algebraic expression for each phrase. The product of -3 and a number s A number v divided by 12 The sum of 4 and a number f	Simplify each expression (-304) (15) 2 x (8) 6 -(-3)	Evaluate each expression for the given values. 3 (c) for c = -3.5 (f x g) for f = and g = 7