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Common Core State Standards Correlation

Each problem in *Critical Thinking: Test-taking Practice for Math* (*Grade 6*) meets one or more of the following Common Core State Standards For more information about the Common Core State Standards, go to *http://www.corestandards.org/* or *http://www.teachercreated.com/standards/*.

Ratios and Proportional Relationships	Problem #s
Understand ratio concepts and use ratio reasoning to solve problems.	
Math.6.RP.A.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.	1–4
Math.6.RP.A.3 Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.	5–8
Math.6.RP.A.3a Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.	5–8
Math.6.RP.A.3b Solve unit rate problems including those involving unit pricing and constant speed.	9–12
Math.6.RP.A.3c Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.	13–16
The Number System	
Apply and extend previous understandings of multiplication and division to divide fractions by fractions.	
Math.6.NS.A.1 Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions.	17–20
Compute fluently with multi-digit numbers and find common factors and multiples.	
Math.6.NS.B.2 Fluently divide multi-digit numbers using the standard algorithm.	21–24
Math.6.NS.B.3 Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.	25–28
Math.6.NS.B.4 Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor.	29–32, 33–36, 37–40
Apply and extend previous understanding of numbers to the system of rational numbers.	
Math.6.NS.C.5 Understand that positive and negative numbers are used together to describe quantities having opposite directions or values; use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.	41–44
Math.6.NS.C.6a Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself.	45–48
Math.6.NS.C.6b Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.	49–52
Math.6.NS.C.6c Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.	53–56

The Number System *(cont.)*	**Problem #s**
Apply and extend previous understanding of number to the system of rational numbers. *(cont.)*	
Math.6.NS.C.7 Understand ordering and absolute value of rational numbers.	57–60
Math.6.NS.C.7c Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation.	61–64
Expressions and Equations	
Apply and extend previous understandings of arithmetic to algebraic expressions.	
Math.6.EE.A.1 Write and evaluate numerical expressions involving whole-number exponents.	65–68
Math.6.EE.A.2 Write, read, and evaluate expressions in which letters stand for numbers.	69–76
Math.6.EE.A.2a Write expressions that record operations with numbers and with letters standing for numbers.	69–72
Math.6.EE.A.2c Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).	73–76
Math.6.EE.A.3 Apply the properties of operations to generate equivalent expressions.	77–80
Reason about and solve one-variable equations and inequalities.	
Math.6.EE.B.5 Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.	81–84
Geometry	
Solve real-world and mathematical problems involving area, surface area, and volume.	
Math.6.G.A.1 Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.	85–88
Math.6.G.A.2 Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = l\ w\ h$ and $V = b\ h$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.	89–92
Statistics and Probability	
Summarize and describe distributions.	
Math.6.SP.B.4 Display numerical data in plots on a number line, including dot plots, histograms, and box plots.	93–96, 97–100
Math.6.SP.B.5 Summarize numerical data sets in relation to their context, such as by:	93–100
Math.6.SP.B.5a Reporting the number of observations.	93–96
Math.6.SP.B.5c Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.	97–100

Test A

Name: _____

Directions: Read each problem carefully and select the best answer.

21. Find the quotient.

3,247 ÷ 45

A. 72
B. 74 R17
C. 72 R7
D. 69 R142

SHOW YOUR WORK!

45 is too great to go into 32; start by dividing into 324.

22. Divide.

6,981 ÷ 287

A. 24 R93
B. 24 R193
C. 24 R103
D. 24

SHOW YOUR WORK!

Look at the answer choices to help with the first step of division. All answer choices begin with 2, so 698 ÷ 287 must begin with 2.

23. Find the quotient.

9,390 ÷ 104

A. 93
B. 90 R30
C. 90
D. 9 R30

SHOW YOUR WORK!

Check your answer by multiplying the quotient by the divisor and then add the remainder.

24. A new bookstore needed 7,719 books to complete their inventory. The store received the same number of books every day in the month of May to complete their inventory. How many books did the bookstore receive each day?

A. 257 R3 books
B. 249 days
C. 248 R31 books
D. 249 books

SHOW YOUR WORK!

There are 31 days in the month of May.

Test A

Name: _____

Directions: Read each problem carefully and select the best answer.

73. Evaluate the expression for $b = 6$.

$b^2 - 4(4) + b \div 2$

A. –1
B. 67
C. 23
D. none of the above

SHOW YOUR WORK!

The variable must be replaced with the value given.

74. Evaluate the expression for $x = 5$.

$x^3 - 5(5) + 2x$

A. 110
B. 0
C. 3,010
D. none of the above

SHOW YOUR WORK!

Follow the order of operations.

75. At Bowl-O-Rama, bowling costs $3.00 per game and shoe rental is $1.00. Use the expression $3g + 1$ to determine how much it will cost Nick to rent shoes and bowl 2 games.

A. $8
B. $4
C. $5
D. $7

SHOW YOUR WORK!

Pay attention to which number should be substituted into the expression.

76. Samantha charges $9 per hour for babysitting and an additional $5 if she needs to prepare a meal. On Saturday she babysat for 6 hours and prepared lunch. Use the expression $9h + 5$ to determine how much Samantha charged her neighbor for babysitting on Saturday.

A. $14
B. $59
C. $84
D. $54

SHOW YOUR WORK!

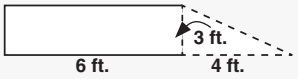
Be sure to replace h with the correct value.

Test B

Name: _____

Directions: Read each problem carefully and select the best answer.

85. Find the area of the parallelogram.

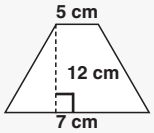


A. 9 ft.^{2}
B. 18 ft.^{2}
C. 6 ft.^{2}
D. 18 ft.

SHOW YOUR WORK!

The parallelogram is the part of the figure that has two sets of parallel sides.

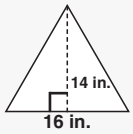
86. Find the area of the trapezoid.



A. 72 in.^{2}
B. 144 cm^2
C. 12 cm^2
D. 72 cm^2

SHOW YOUR WORK!

87. Find the area of the triangle.

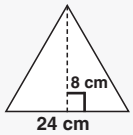


A. 112 in.
B. 224 in.^{2}
C. 112 in.^{2}
D. 15 in.^{2}

SHOW YOUR WORK!

Remember the formula for finding the area of a triangle: $A = \frac{1}{2}\,bh$.

88. Find the area of the triangle.



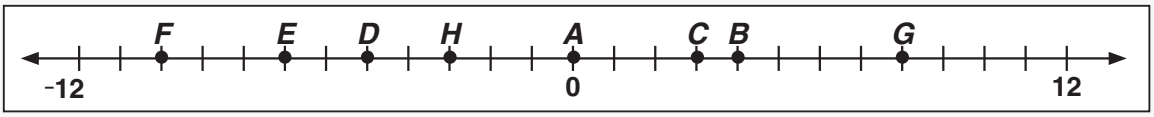
A. 192 cm^2
B. 16 cm
C. 96 cm^2
D. 96 cm

SHOW YOUR WORK!

Test C

Name: _____

Directions: Read each problem carefully and select the best answer.



Use the number line to answer questions 61 and 62.

61. Which set of numbers shows the integer naming point *G* on the number line followed by its absolute value?

A. -8 and 8

B. 7 and 7

C. 8 and 8

D. 8 and -8

62. Which set of numbers shows the integer naming point *D* on the number line followed by its absolute value?

A. -4 and 4

B. -5 and -5

C. 5 and 5

D. -5 and 5

63. Prospect Creek Camp in northern Alaska recorded a record low temperature of 80° below zero. Write an integer to represent the temperature and the absolute value of that integer.

A. -80 and 80

B. 80 and -80

C. 80 and 80

D. -80 and -80

64. One of the highest temperatures recorded in the western hemisphere was one hundred thirty-four degrees in Death Valley, California. Write an integer to represent one hundred thirty-four degrees and the absolute value of that integer.

A. -134 and 134

B. 134 and -134

C. -134 and -134

D. 134 and 134