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Common Core State Standards Correlation

Each question in *Critical Thinking: Test-taking Practice for Math (Grade 5)* meets one or more of the following Common Core State Standards© Copyright 2010. National Governors Association Center for Best Practices and Council of Chief State School Officers. All rights reserved. For more information about these standards, go to <http://www.corestandards.org/> or <http://www.teachercreated.com/standards/>.

Operations & Algebraic Thinking	Problem #s
Math.5.OA.A.1 Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.	37–44
Number & Operations in Base Ten	
Math.5.NBT.A.1 Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and $\frac{1}{10}$ of what it represents in the place to its left.	15–16
Math.5.NBT.A.3 Read, write, and compare decimals to thousandths.	13–14
Math.5.NBT.A.3a Read and write decimals to thousandths using base-ten numerals, number names, and expanded form.	9–12
Math.5.NBT.A.3b Compare two decimals to thousandths based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record results of comparison.	17–20
Math.5.NBT.A.4 Use place value understanding to round decimals to any place.	21–24
Math.5.NBT.B.5 Fluently multiply multi-digit whole numbers using the standard algorithm.	1–4
Math.5.NBT.B.6 Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	5–8
Math.5.NBT.B.7 Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain reasoning used.	25–28, 29–32 33–36
Number & Operations — Fractions	
Math.5.NF.A.1 Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators.	45–48, 49–52, 53–56
Math.5.NF.A.2 Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem.	49–52, 53–56

Number & Operations — Fractions	
Math.5.NF.B.4 Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.	57–60 61–64
Math.5.NF.B.4b Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.	93–96
Math.5.NF.B.6 Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.	59–60, 62, 64, 71–72
Math.5.NF.B.7 Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.	65–68
Math.5.NF.B.7c Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models or equations to represent the problem. (An example is included online.)	66, 68, 69–70
Measurement & Data	
Math.5.MD.A.1 Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.	73–76
Math.5.MD.B.2 Make a line plot to display a data set of measurements in fractions of a unit. Use operations on fractions for this grade to solve problems involving information presented in line plots. (An example is included online.)	81–84
Math.5.MD.C.3 Recognize volume as an attribute of solid figures and understand concepts of volume measurements.	85–88
Math.5.MD.C.4 Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.	85–88
Math.5.MD.C.5a Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.	89–92
Geometry	
Math.5.G.A.1 Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate).	77–80
Math.5.G.B.3 Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. (An example is included online.)	97–100

Test A

Name: _____

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

41. Which value makes the number sentence true?

$$4 \times [(3 + 5) \times (12 - 7)] = \underline{\hspace{2cm}}$$

- A. 40
- B. 160
- C. 356
- D. 32

SHOW YOUR WORK!

Do the computations inside the parentheses first, then simplify what's left inside the brackets.

42. Simplify.

$$[(8^2 \div 4) + (3 \times 9)] - 6$$

- A. 25
- B. 43
- C. 23
- D. 37

SHOW YOUR WORK!

First find the value of the number with the exponent.

43. Simplify.

$$[7 \times (45 \div 9)] + 236$$

- A. 1,687
- B. 8,260
- C. 271
- D. 35

SHOW YOUR WORK!

Operations inside parentheses are always done first. Then, simplify what's left inside the brackets.

44. Evaluate the expression for $n = 2$.

$$n \times [(2.3 \times 7.1) - (4.21 + 9.8)]$$

- A. 2.32
- B. 38.25
- C. 18.65
- D. 4.64

SHOW YOUR WORK!

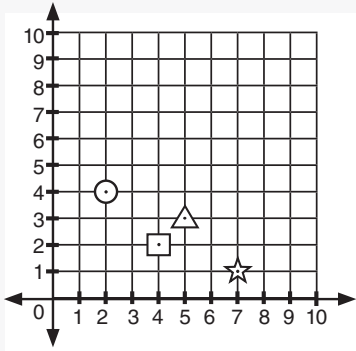
Follow these steps to solve:
 1. parentheses
 2. brackets
 3. multiply

Test A

Name: _____

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

Use the grid to answer questions 77 and 78.



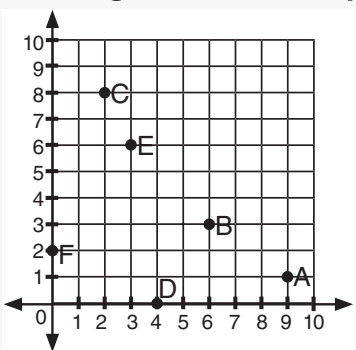
77. Which shape is located at (2,4) on the grid?
 A. triangle B. square C. circle D. star

Start at 0. Move 2 spaces to the right. Then move 4 spaces up. What shape do you see?

78. Which shape is located at (5,3) on the grid?
 A. triangle B. square C. circle D. star

The first number tells how far to move to the right. The second number tells how far to move up.

Use the grid to answer questions 79 and 80.



79. What is the ordered pair for point B?
 A. (3,6) B. (2,8) C. (0,2) D. (6,3)
80. What is the ordered pair for point D?
 A. (2,8) B. (4,0) C. (0,2) D. (9,1)

Count to the *right* until you are under the B. Then count *up* to the B.

Remember, the first coordinate tells how far right from 0 the point is, and the second coordinate tells how far up from 0 the point is.

Test B

Name: _____

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

Use the information below to answer questions 81–84.

For every hockey game, the coach brought juice for the team. The values below show how many quarts of juice the team drank at each game.

$6\frac{1}{4}$, $10\frac{1}{2}$, $7\frac{1}{8}$, $9\frac{1}{2}$, $10\frac{1}{2}$, $6\frac{1}{4}$, $9\frac{1}{2}$, $10\frac{1}{2}$, $7\frac{1}{8}$, $6\frac{1}{4}$, $7\frac{1}{8}$, $6\frac{1}{4}$, $8\frac{3}{4}$, $9\frac{1}{2}$, $8\frac{3}{4}$,
$6\frac{1}{4}$, $8\frac{3}{4}$, $9\frac{1}{2}$, $10\frac{1}{2}$, $10\frac{1}{2}$, $7\frac{1}{8}$, $6\frac{1}{4}$

81. Which set of tally marks should be in the table for $6\frac{1}{4}$ quarts of juice?

- A. ~~||||~~
- B. ||||
- C. ~~||||~~ |
- D. ~~||||~~ ||

Number of Quarts	Tally	Frequency
$6\frac{1}{4}$		6
$7\frac{1}{8}$		4
$8\frac{3}{4}$		3
$9\frac{1}{2}$		4
$10\frac{1}{2}$	 	5

82. What is the difference between the greatest and least number of quarts of juice drank at each game?

- A. $16\frac{3}{4}$ quarts
- B. $3\frac{1}{4}$ quarts
- C. $4\frac{1}{4}$ quarts
- D. $4\frac{1}{2}$ quarts

SHOW YOUR WORK!

Use the correct operation to find the *difference*.

83. How many Xs should be on the line plot to show the number of times the team drank $7\frac{1}{8}$ quarts of juice?

- A. 6
- B. 3
- C. 5
- D. 4

Each X represents one time that the coach brought juice to the team.

84. How many Xs would be on the line plot showing how many times the coach brought juice to a game?

- A. 19
- B. 22
- C. 17
- D. 16

Test C**Name:** _____**Directions:** Read each problem carefully and select the best answer. Answers should be in simplest form.

- 53.** Andrew drives $21\frac{2}{5}$ miles to work each day and Michael drives $15\frac{1}{15}$ miles to work each day. How much farther does Andrew drive to work each day than Michael?

- A. $6\frac{1}{3}$ miles
B. $6\frac{5}{15}$ miles
C. $7\frac{1}{3}$ miles
D. $6\frac{7}{15}$ miles

SHOW YOUR WORK!

- 54.** Claudia used $5\frac{3}{5}$ yards of red fabric and $4\frac{1}{2}$ yards of green fabric to make decorations for the holiday. How much fabric did she use in all?

- A. $9\frac{11}{10}$ yards
B. $10\frac{1}{10}$ yards
C. $1\frac{1}{10}$ yards
D. $9\frac{4}{7}$ yards

SHOW YOUR WORK!

- 55.** Kako put $3\frac{4}{10}$ bags of fertilizer on the front lawn and $2\frac{2}{3}$ bags of fertilizer on the back lawn. How many bags of fertilizer did Kako put on the entire lawn?

- A. $6\frac{2}{30}$ bags
B. $5\frac{6}{13}$ bags
C. $5\frac{1}{15}$ bags
D. $6\frac{1}{15}$ bags

SHOW YOUR WORK!

- 56.** Angela ordered 7 pizzas for her party. After the party she had $3\frac{4}{12}$ pizzas left. How much pizza was eaten at the party?

- A. $3\frac{8}{12}$ pizzas
B. $3\frac{4}{6}$ pizzas
C. $3\frac{2}{3}$ pizzas
D. $4\frac{2}{3}$ pizzas

SHOW YOUR WORK!