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## Common Core State Standards Correlation

Each question in Critical Thinking: Test-taking Practice for Math (Grade 3) 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 |
| :---: | :---: |
| Represent and solve problems involving multiplication and division. |  |
| Math.3.OA.A. 3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. | $\begin{aligned} & 13-16,17-20, \\ & 25-28,31-32 \end{aligned}$ |
| Understand properties of multiplication and the relationship between multiplication and division. |  |
| Math.3.OA.B. 5 Apply properties of operations as strategies to multiply and divide. Examples: If $6 \times 4=24$ is known, then $4 \times 6=24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5=15$, then $15 \times 2=30$, or by $5 \times 2=10$, then $3 \times 10=30$. (Associative property of multiplication.) Knowing that $8 \times 5=40$ and $8 \times 2=16$, one can find $8 \times 7$ as $8 \times(5+2)=$ $(8 \times 5)+(8 \times 2)=40+16=56$. (Distributive property.) | 21-24 |
| Solve problems involving the four operations, and identify and explain patterns in arithmetic. |  |
| Math.3.OA.B. 8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. | $\begin{aligned} & 29-30,33-36, \\ & 37-40,45-48, \\ & 49-52 \end{aligned}$ |
| Number \& Operations in Base Ten |  |
| Use place value understanding and properties of operations to perform multi-digit arithmetic. |  |
| Math.3.NBT.A. 1 Use place value understanding to round whole numbers to the nearest 10 or 100. | 41-44, 45-48 |
| Math.3.NBT.A. 2 Fluently add and subtract within 1,000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. | 1-4 |
| Math.3.NBT.A. 3 Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (e.g., $9 \times 80,5 \times 60$ ) using strategies based on place value and properties of operations. | 49-52 |
| Number \& Operations-Fractions |  |
| Develop understanding of fractions as numbers. |  |
| Math.3.NF.A. 2 Understand a fraction as a number on the number line; represent fractions on a number line diagram. | 53-56 |
| Math.3.NF.A.2a Represent a fraction $1 / b$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into $b$ equal parts. Recognize that each part has size $1 / b$ and that the endpoint of the part based at 0 locates the number $1 / b$ on the number line. | 53-56 |
| Math.3.NF.A. 3 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. | 57-60 |


| Number \& Operations-Fractions (cont.) | Problem \#s |
| :---: | :---: |
| Math.3.NF.A.3a Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line. | 57-60 |
| Math.3.NF.A.3b Recognize and generate simple equivalent fractions, e.g., $1 / 2=$ $2 / 4,4 / 6=2 / 3$ ). Explain why the fractions are equivalent, e.g., by using a visual fraction model. | 57-60 |
| Math.3.NF.A.3c Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form $3=3 / 1$; recognize that $6 / 1=6$; locate $4 / 4$ and 1 at the same point of a number line diagram. | 61-64 |
| Measurement \& Data |  |
| Solve problems involving measurement and estimation. |  |
| Math.3.MD.A. 1 Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram. | $\begin{aligned} & 73-76,77-80, \\ & 81-84,85-88 \end{aligned}$ |
| Math.3.MD.A. 2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (I). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem. | 65-68 |
| Represent and interpret data. |  |
| Math.3.MD.B. 3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets. | 5-8, 9-12 |
| Geometric measurement: understand concepts of area and relate area to multiplication and to addition. |  |


| Math.3.MD.C. 5 Recognize area as an attribute of plane figures and understand <br> concepts of area measurement. | $93-96$ |
| :--- | :--- |
| Math.3.MD.C. 7 Relate area to the operations of multiplication and addition. | $93-96$ |
| Geometric measurement: recognize perimeter. |  |

Math.3.MD.D. 8 Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.

## Geometry

## Reason with shapes and their attributes.

Math.3.G.A. 1 Understand that shapes in different categories (e.g., rhombuses, shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.

## Test A

Name:

Directions: Look at the pictograph carefully. Select the best answer for each question.
An ice-cream company asked 40 children to name their favorite ice-cream flavors. The pictograph below shows the results of that survey.

Key: 些 $=2$ Children

| Favorite Ice Cream |  |  |  |
| :---: | :---: | :---: | :---: |
| Flavors | Number of Votes |  |  |
| Chocolate | Nanilla |  |  |
| Strawberry |  |  |  |
| Chocolate Chip |  |  |  |

9. How many children chose vanilla ice cream as their favorite?
A. 4
B. 2
C. 8
D. 5
10. What ice-cream flavor was chosen by four more children than chocolate?
A. vanilla
B. strawberry
C. chocolate chip
D. none
11. If there was only half a cone on the pictograph, what would that mean?
A. Someone ate the other half.
B. It stands for 1 child.
C. It stands for 2 children.
D. It means a child was not sure what flavor he liked.
12. How many children liked strawberry and chocolate ice cream in all?
A. 16
B. 12
C. 8
D. 20

Pictographs use pictures or symbols to represent data. The key shows the amount represented by each picture.

When you see half of a picture, it stands for half the amount.
Check the key to find out what each ice-cream cone represents. One cone equals two children.


## Test A

Name:

Directions: Read each problem carefully and select the best answer.
77. What time is shown on the clock?
A. half past 5
B. $5: 28$
C. $6: 28$
D. twenty-eight minutes to 5

78. Michael went to the library at 6:41. What is another way to say that time?
A. twenty minutes to 7
B. nineteen minutes to 6
C. nineteen minutes to 7
D. forty-one minutes to 6

79. Cindy and her family went out to dinner. They were at the restaurant for 1 hour and 38 minutes. How many minutes were Cindy and her family at the restaurant in all?
A. 38 minutes
B. 39 minutes
C. 22 minutes
D. 98 minutes

## SHOW YOUR WORK!

80. Krystle started to practice the piano at the time shown on the clock. What time did Krystle start to practice?
A. one fifty-one
B. ten minutes to one
C. two fifty-one
D. seven minutes after ten


## Test B

Name:

Directions: Read each problem carefully and select the best answer.
53. What fraction does the number line show?
A. $\frac{3}{7}$
B. $\frac{4}{7}$

C. $\frac{4}{6}$
D. $\frac{2}{3}$
54. What fraction of the shape is not shaded?
A. $\frac{3}{4}$
B. $\frac{1}{8}$
C. $\frac{2}{4}$

D. $\frac{1}{4}$
55. Twelve students went to the county fair. Eight of the students saw the horse race. What fraction of the students saw the horse race?
A. $\frac{4}{12}$
B. $\frac{3}{12}$
C. $\frac{8}{12}$
D. $\frac{6}{12}$

56. Sandy made a pizza with 8 equal slices. She put pepperoni on 5 slices. What fraction of the pizza did not have pepperoni?
A. $\frac{3}{8}$
B. $\frac{5}{8}$
C. $\frac{1}{8}$
D. $\frac{4}{8}$

## Test C

Name:

Directions: Read each problem carefully and select the best answer.
93. Which two figures have the same area? $\square=1$ square unit
A. 1 and 2
B. 2 and 3
C. 1 and 3
1.

D. none
94. What is the area of the square?

A. 25 sq. m
B. $10 \mathrm{sq} . \mathrm{m}$
C. $5 \mathrm{sq} . \mathrm{m}$
D. 20 sq. m
95. Blake's bedroom is 13 ft . long and 8 ft . wide. What is the area of Blake's bedroom?
A. $64 \mathrm{sq} . \mathrm{ft}$.
B. $104 \mathrm{sq} . \mathrm{ft}$.
C. $21 \mathrm{sq} . \mathrm{ft}$.
D. 42 sq . ft.
96. What is the area of the figure?
A. 36 sq. in.
B. 32 sq. in.
C. 100 sq. in.
D. $44 \mathrm{sq} . \mathrm{in}$.


