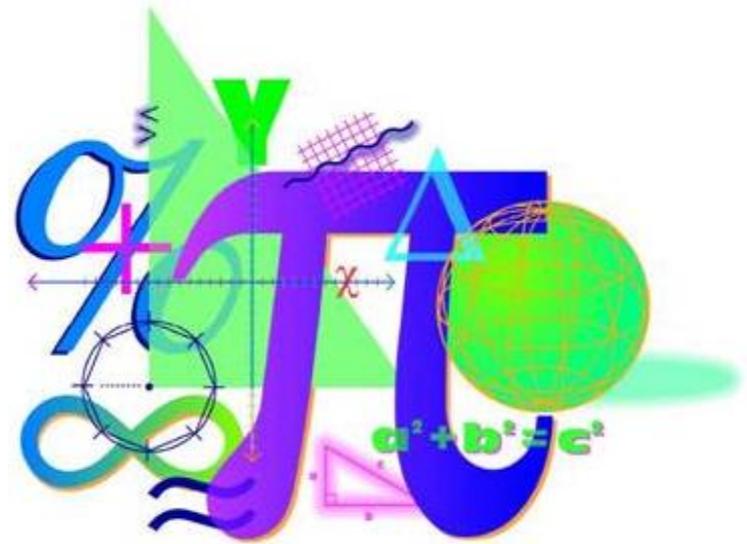


Spring 2013 Student Performance Analysis

Grade 3 Mathematics Standards of Learning



Presentation may be paused and resumed
using the arrow keys or the mouse.

Comparing Fractions

SOL 3.3

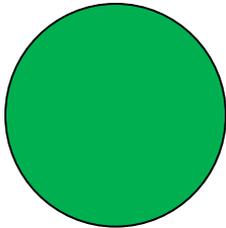
The student will

- a) name and write fractions (including mixed numbers) represented by a model;
- b) model fractions (including mixed numbers) and write the fractions' names; and
- c) compare fractions having like and unlike denominators, using words and symbols ($>$, $<$, or $=$).

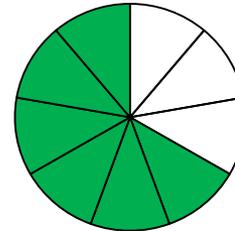
Suggested Practice for SOL 3.3

Students need additional practice comparing fractions with unlike denominators.

This model is shaded to represent one whole.

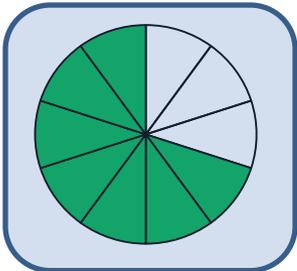


Model 1 is shaded to show a fraction of one whole.



Model 1

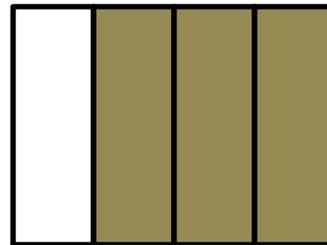
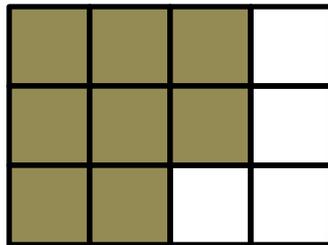
Which is shaded to show a fraction with a value equal to the fraction shaded in Model 1?



$$\frac{3}{10} < \frac{3}{9} \quad \text{OR} \quad \frac{3}{9} > \frac{3}{10}$$

Suggested Practice for SOL 3.3

Carla made two cakes that were the same size and served them to guests at her party. The figures have been shaded to represent the fraction of each cake that was left after the party.



Which correctly compares the shaded parts of the two figures?

A $\frac{8}{12} = \frac{3}{4}$

B $\frac{4}{12} < \frac{1}{4}$

C $\frac{8}{12} < \frac{3}{4}$

D $\frac{4}{12} = \frac{1}{4}$

Solving Problems Using Whole Number Addition or Subtraction

SOL 3.4

The student will estimate solutions to and **solve** single-step and **multistep problems involving the sum or difference of two whole numbers**, each 9,999 or less, with or without regrouping.

Suggested Practice for SOL 3.4

Students need additional practice solving multistep problems involving the addition and/or subtraction of whole numbers.

This table shows the number of lunches sold in the school cafeteria on three days this week.

School Lunches

Day	Number of Lunches Sold
Monday	362
Tuesday	349
Wednesday	371

- 1) Last week a total of 770 lunches were sold on Monday and Wednesday. Find the difference in the number of lunches sold on Monday and Wednesday this week and the same two days last week. **37**
- 2) The cafeteria manager wants to sell a total of 1,500 lunches each week. How many more lunches must be sold on Thursday and Friday combined to reach that goal? **418**

Solving Multiplication Problems

SOL 3.6

The student will represent multiplication and division, using area, set, and number line models, and create and **solve problems that involve multiplication** of two whole numbers, one factor 99 or less and the second factor 5 or less.

Suggested Practice for SOL 3.6

Students need additional practice solving multiplication problems presented in the context of a word problem.

- 1) A store has 5 hair clips in each of 64 packages. What is the total number of hair clips in these packages? **320 hair clips**
- 2) Mr. Baker has 4 shelves of textbooks. There are 28 textbooks on each of these shelves. How many textbooks in all are on these shelves? **112 textbooks**
- 3) Each third grade class at a school has exactly 24 students in each of 3 classes. What is the total number of third grade students at this school? **72 students**

Subtracting Fractions with Like Denominators

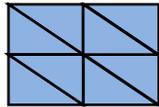
SOL 3.7

The student will add and **subtract proper fractions** having like denominators of 12 or less.

Suggested Practice for SOL 3.7

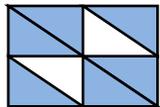
Students need additional practice subtracting fractions with like denominators. Models should be provided.

This model is shaded to represent one whole.

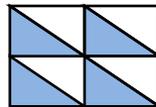


These models are each shaded to represent a fraction.

Model 1



Model 2



What is the difference between the fraction shaded in Model 1 and the fraction shaded in Model 2?

$$\frac{2}{8}$$

$$\frac{10}{16}$$

$$\frac{10}{8}$$

$$\frac{2}{16}$$

Measuring to Find Perimeter

SOL 3.10

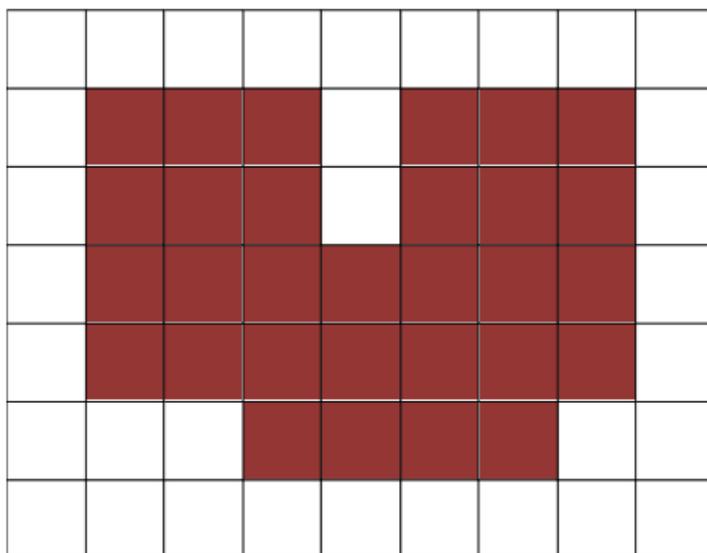
The student will

- a) measure the distance around a polygon in order to **determine perimeter**; and
- b) count the number of square units needed to cover a given surface in order to determine area.

Suggested Practice for SOL 3.10

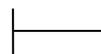
Students need additional practice determining the perimeter of a figure on a grid.

Look at the shaded figure on the grid.



Key

= 1 square unit



←→
1 unit

Using the key, find the perimeter and area of the shaded figure.

Perimeter = 28 units and Area = 30 square units

Telling Time on Analog Clocks

SOL 3.11

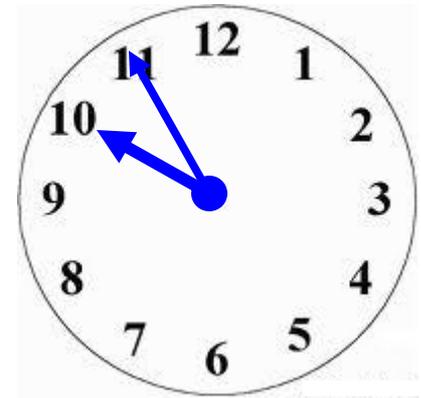
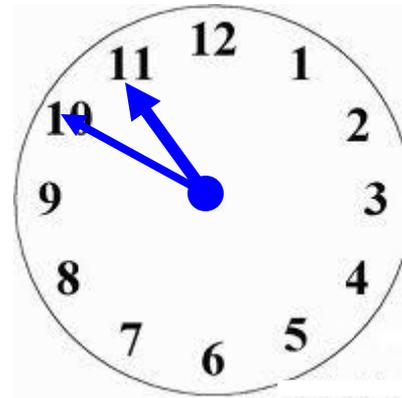
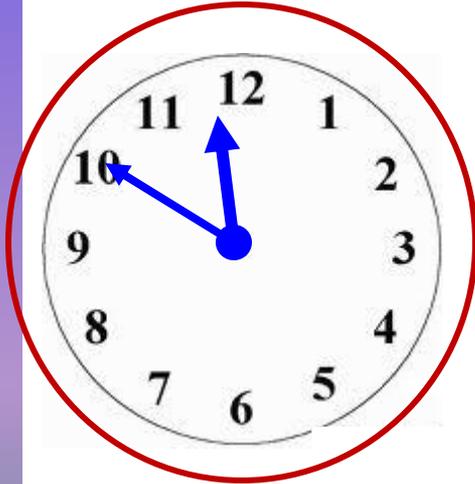
The student will

- a) **tell time to the nearest minute, using analog and digital clocks; and**
- b) **determine elapsed time in one-hour increments over a 12-hour period.**

Suggested Practice for SOL 3.11

Students need additional practice determining which clock shows a given time.

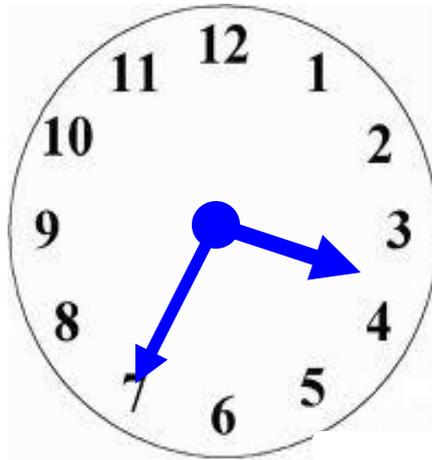
Circle the clock that best shows 11:50.



Suggested Practice for SOL 3.11

Students need additional practice determining elapsed time.

Joy left home to visit her grandmother at the time shown on this clock.



Joy arrived back at home 4 hours later. At what time did Joy arrive back at home? **7:35**

Analyzing Data Represented in Graphs

SOL 3.17

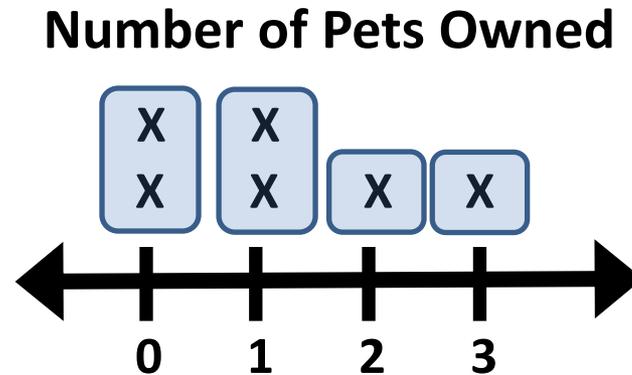
The student will

- a) collect and organize data, using observations, measurements, surveys, or experiments;
- b) construct a line plot, a picture graph, or a bar graph to represent the data; and
- c) read and **interpret the data represented in line plots, bar graphs, and picture graphs and write a sentence analyzing the data.**

Suggested Practice for SOL 3.17

Students need additional practice interpreting information presented in line plots.

Simon collected data on the number of pets owned by each of his neighbors. He made this line plot to represent the data.



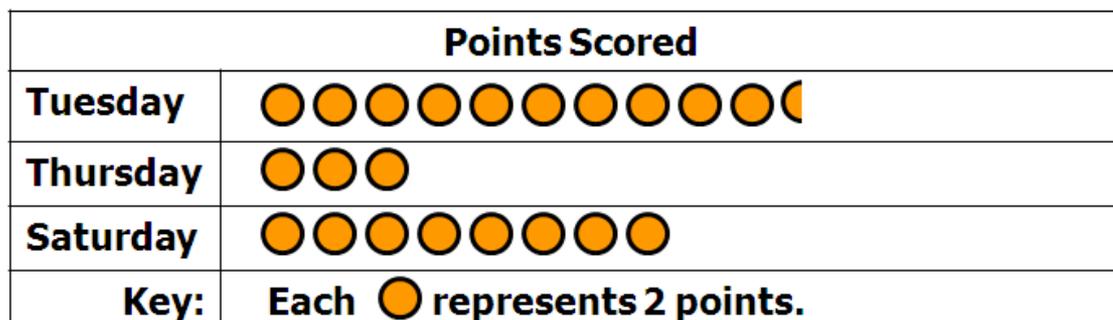
Each X represents 1 neighbor.

- 1) Exactly how many of Simon's neighbors owned less than 3 pets? **5**
- 2) What was the total number of pets owned by Simon's neighbors? **$0 + 0 + 1 + 1 + 2 + 3 = 7$ total pets**

Suggested Practice for SOL 3.17

Students need additional practice analyzing information presented in pictographs.

This graph represents the number of points scored by a team on three days.



Based on the graph, which statement(s) are true?

- The team scored a total of 43 points on these 3 days combined.
- The team scored more points on Tuesday than it scored on Thursday and Saturday combined.
- Exactly 5 more points were scored on Saturday than on Thursday.
- Exactly five more points were scored on Tuesday than on Saturday.

Practice Items

This concludes the student performance information for the spring 2013 Grade 3 Mathematics SOL test.

Additionally, test preparation practice items for Grade 3 Mathematics can be found on the Virginia Department of Education Web site at:

http://www.doe.virginia.gov/testing/sol/practice_items/index.shtml#math

Contact Information

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