

Name _____

Date _____

Set 1 - Standard(s): 7.SP.1, 7.SP.2, 7.SP.3, 7.SP.4

NAEP Questioning Tool

Day 1 Items

1. Rick has earned a total of 581 points on all of his science tests. His overall test average (mean) is 83. How many tests has Rick taken?
 - a. 6
 - b. 7
 - c. 8
 - d. 9
 - e. 10

2. Last month Bonnie recorded the weights of 11 dogs. Statistics for these weights are given below.

WEIGHTS OF DOGS LAST MONTH

Minimum	31 pounds
Maximum	93 pounds
Mean	81 pounds
Mode	88 pounds
First Quartile	78 pounds
Median	88 pounds
Third Quartile	90 pounds

This month, Bonnie weighed the 11 dogs again. The weight of one dog changed from 31 pounds to 27 pounds. The weights of all the other dogs stayed the same.

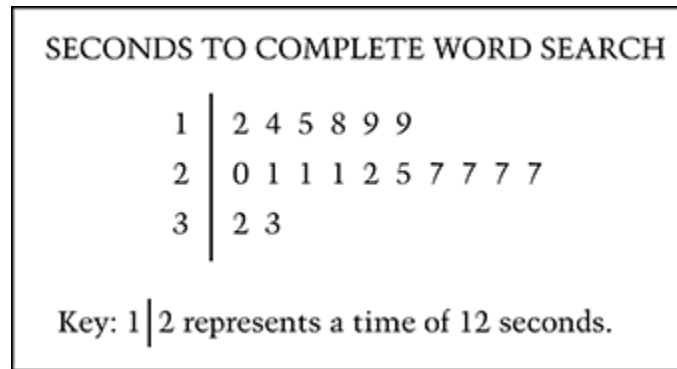
- Which of the following statistics changed from last month to this month?
- a. Maximum
 - b. Mean
 - c. Mode
 - d. First Quartile
 - e. Median

Set 1 - Standard(s): 7.SP.1, 7.SP.2, 7.SP.3, 7.SP.4

NAEP Questioning Tool

Day 1 Items

3. The stem-and-leaf plot below shows the number of seconds it took each student in a class of 18 to complete a word search. 4. How many students took more than 25 seconds to complete the word search?



- a. 4
- b. 5
- c. 6
- d. 7
- e. 10

Name _____

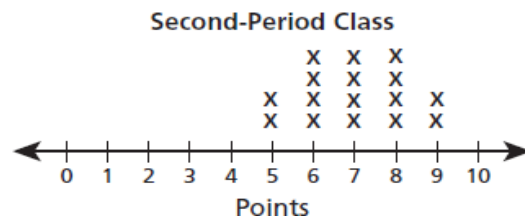
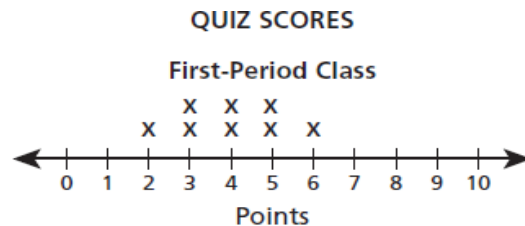
Date _____

Set 1 - Standard(s): 7.SP.2, 7.SP.3

Engage NY

Day 2 Items

1. Laticia randomly selected 25% of the seventh-grade students in her school and asked them their favorite season. Of the students surveyed, 51 chose summer as their favorite season. Based on the data, what is the most reasonable prediction of the number of seventh-grade students in her school who would choose summer as their favorite season?
 - a. 15
 - b. 75
 - c. 150
 - d. 200
2. Ms. Andrews made the line plots below to compare the quiz scores for her first-period math class and her second-period math class. She gave the same quiz to each class.



What conclusion can Ms. Andrews make about the performance of her first- and second-period classes?

- a. The first-period class had a higher median score than the second-period class.
- b. The second-period class scores had a higher mean than the first-period class scores.
- c. The first-period class scores had a greater range than the second-period class scores.
- d. The second-period class scores had a greater mean absolute deviation than the first-period class scores.

Set 1 - Standard(s): 7.SP.2, 7.SP.3 (continued)

Engage NY

Day 2 Items

3. To select a new school mascot, 20 randomly selected students in each grade were asked to choose between the two finalists: tiger and eagle. The results are shown below.

PREFERRED MASCOT

Grade	Tiger	Eagle
5	14	6
6	13	7
7	8	12
8	5	15

Which statement is best supported by the results?

- a. The preferred mascot is a tiger.
- b. The preferred mascot is an eagle.
- c. Fifth and sixth grade students at the school preferred an eagle mascot.
- d. Seventh and eighth grade students at the school preferred an eagle mascot.

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Date _____

Set 1 - Standard(s): 7.SP.5, 7.SP.6, 7.SP.7, 7.SP.8

NAEP Questioning Tool

Day 3 Items

1. Each of the 6 faces of a fair cube is painted red, yellow, or blue. This cube is rolled 500 times. The table below shows the number of times each color landed faced up.

Color	Red	Yellow	Blue
Total	100	340	60

Based on these results, what is the most likely number of yellow faces on the cube?

- a. One
 - b. Two
 - c. Three
 - d. Four
 - e. Six
2. Ken has a box that contains 12 marbles. The table below shows the number of marbles of each color that are in the box.

Color	Number of Marbles
Yellow	5
Green	3
Orange	2
Blue	2

Ken randomly selects 2 marbles from the box and keeps them. If Ken then randomly selects a third marble from the box, the probability that he will select a green marble is $\frac{2}{10}$. Which of the following statements could be true about the first 2 marbles Ken selected?

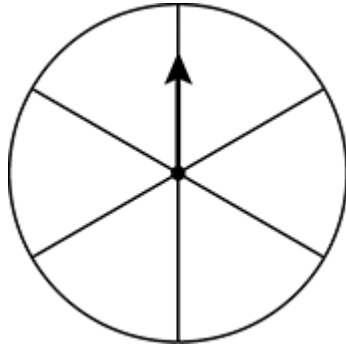
- a. One was yellow and one was green.
- b. One was orange and one was yellow.
- c. One was orange and one was blue.
- d. Both were green.
- e. Both were yellow.

Set 1 - Standard(s): 7.SP.5, 7.SP.6, 7.SP.7, 7.SP.8

NAEP Questioning Tool

Day 3 Items

3. The circular spinner shown below is divided into 6 congruent sectors. The sectors are yellow or blue.



Label each of the sectors either yellow (Y) or blue (B) so that the probability of spinning the arrow once and landing on yellow is $\frac{1}{3}$.

Name _____

Date _____

Set 1 - Standard(s): 7.SP.5, 7.SP.6, 7.SP.7, 7.SP.8

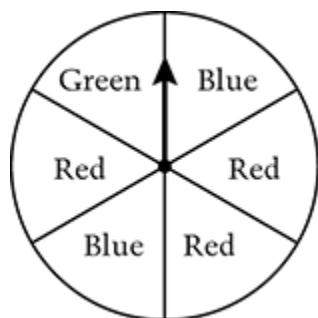
NAEP Questioning Tool, Engage NY

Day 4 Items

1. How many different three-digit whole numbers can be written using each of the digits 4, 5, and 6 exactly once?

- a. 3
- b. 6
- c. 9
- d. 24
- e. 27

2. The spinner below is divided into 6 congruent sectors.



If the arrow is spun once, what is the probability that the arrow will land on either Red or Blue?

- a. $\frac{5}{6}$
- b. $\frac{2}{3}$
- c. $\frac{1}{2}$
- d. $\frac{1}{5}$
- e. $\frac{1}{6}$

3. Sara is playing a board game. The probability that Sara will score a point on her next turn is $\frac{1}{3}$.

Which statement describes the probability that Sara will score a point on her next turn?

- a. likely
- b. certain
- c. unlikely
- d. impossible

- NAEP Questioning Tool - <http://nces.ed.gov/nationsreportcard/nqt/>, SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009, 2011, 2013 Mathematics Assessment.
- <https://www.engageny.org/resource/new-york-state-common-core-sample-questions>, Engage NY

Set 1 - Standard(s): 7.SP.5, 7.SP.6, 7.SP.7

Engage NY

Day 5 Items

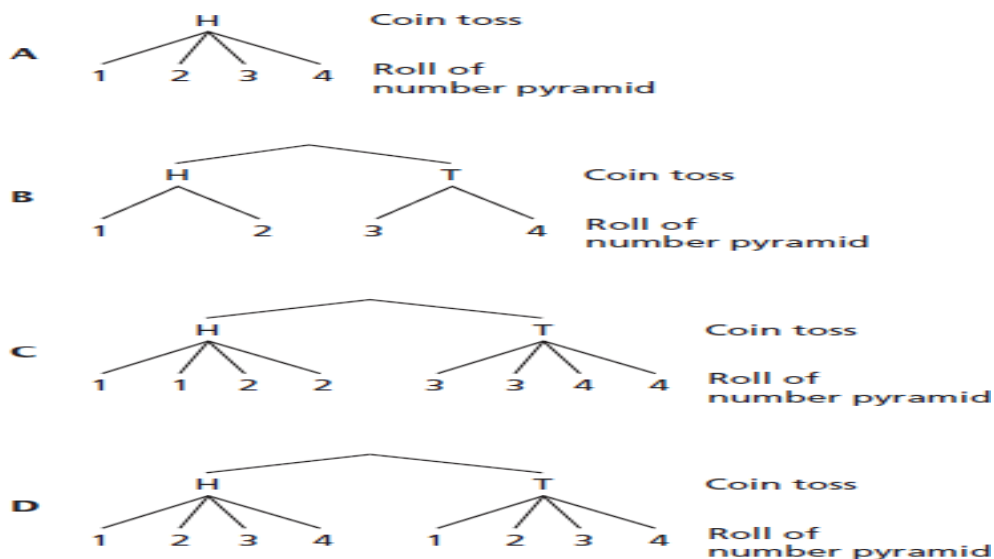
1. The school bus Evie rides is scheduled to arrive at her stop at 8:20 a.m. each day. The table below shows the actual arrival times of the bus for several days that were randomly selected over the past few months.

BUS ARRIVAL TIMES (a.m.)

8:21	8:21	8:19	8:20	8:23
8:22	8:20	8:18	8:20	8:18
8:21	8:20	8:19	8:17	8:25
8:20	8:20	8:18	8:19	8:24

Based on these data, what is the probability that the bus will arrive at Evie's stop before 8:20 a.m. tomorrow?

- a. $\frac{3}{10}$
 b. $\frac{3}{7}$
 c. $\frac{20}{13}$
 d. $\frac{1}{20}$
2. Cassie rolls a fair number cube with 6 faces labeled 1 through 6. She rolls the number cube 300 times. Which result is **most** likely?
- a. Cassie will roll a 1 or a 2 about 50 times.
 b. Cassie will roll a 1 or a 2 exactly 50 times.
 c. Cassie will roll an even number about 150 times.
 d. Cassie will roll an even number exactly 150 times.
3. Which tree diagram shows all of the possible outcomes for tossing a coin and rolling a fair number pyramid that has four sides labeled 1 through 4?



Set 1 - Standard(s): 7.SP.1, 7.SP.2, 7.SP.3, 7.SP.4

NAEP Questioning Tool

Day 1 Items - KEY

1. B
2. B
3. C

NAEP Questioning Tool - <http://nces.ed.gov/nationsreportcard/nqt/>, SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009, 2011, 2013 Mathematics Assessment.

Set 1 - Standard(s): 7.SP.2, 7.SP.3

Engage NY - <https://www.engageny.org/resource/new-york-state-common-core-sample-questions>, Engage NY

Day 2 Items - KEY

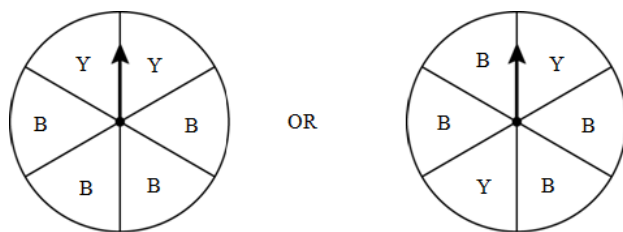
1. D
2. B
3. D

Set 1 - Standard(s): 7.SP.5, 7.SP.6, 7.SP.7, 7.SP.8

NAEP Questioning Tool

Day 3 Items - KEY

1. D
2. A
3. A Sample Correct Response:



NOTE: A correct response is any spinner with 6 sectors having any 2 sectors labeled yellow (Y) and any 4 sectors labeled blue (B).

NAEP Questioning Tool - <http://nces.ed.gov/nationsreportcard/nqt/>, SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009, 2011, 2013 Mathematics Assessment.

Set 1 - Standard(s): 7.SP.5, 7.SP.6, 7.SP.7, 7.SP.8

NAEP Questioning Tool, Engage NY

Day 4 Items - KEY

1. B
2. A
3. C

- NAEP Questioning Tool - <http://nces.ed.gov/nationsreportcard/nqt/>, SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009, 2011, 2013 Mathematics Assessment.
- <https://www.engageny.org/resource/new-york-state-common-core-sample-questions>, Engage NY

Set 1 - Standard(s): 7.SP.5, 7.SP.6, 7.SP.7

Engage NY - <https://www.engageny.org/resource/new-york-state-common-core-sample-questions>, Engage NY

Day 5 Items - KEY

1. C
2. C
3. D