



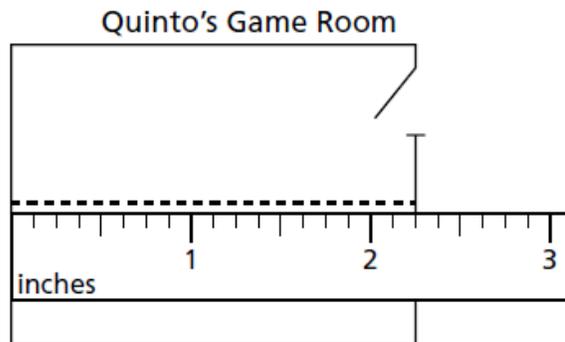
SAMPLES OF STANDARDS STUDENTS ARE LEARNING THIS NINE WEEKS:

7th Grade Comp Math

STANDARDS: 7.G.1, 7.G.3, 7.G.5, 7.SP.1, 7.SP.2, 7.SP.5, 7.SP.7a, 7.SP.8b, 7.SP.8c

7.G.1: Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.

The figure below is a scale drawing of Quinto's game room. The scale used to create the drawing was $\frac{1}{2}$ inch = 4 feet.



If the scale had been $\frac{3}{4}$ inch = 4 feet, how many inches longer would the scale drawing of Quinto's game room be?

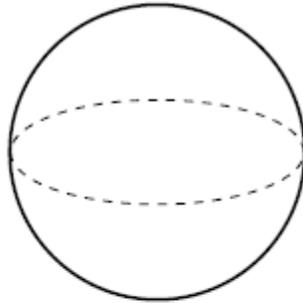
- A $\frac{7}{8}$ inch
- B $1\frac{1}{8}$ inches
- C $3\frac{1}{8}$ inches
- D $3\frac{3}{8}$ inches

Go On

Answer B is correct.

7.G.3: Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.

Suppose the sphere shown is sliced by a plane.



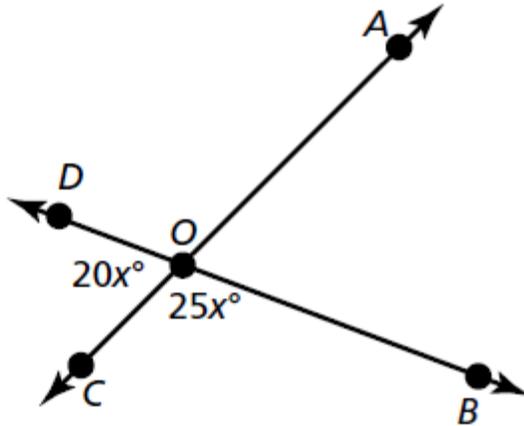
When could the resulting figure be a circle? Mark all that apply.

- A** when the plane is parallel to the ground
- B** when the plane is perpendicular to the ground
- C** when the plane passes through the center of the sphere
- D** when the plane does not pass through the center of the sphere
- E** when the plane intersects the sphere at only one point

Answers A, B, C, and D are correct.

7.G.5: Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.

Lines \overline{AC} and \overline{BD} intersect at O as shown.



What is the measure, in degrees, of $\angle BOC$? Record your answer .

The correct answer is 100° .

7.SP.1: Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.

A storeowner is considering extending the hours the store is open each day. He conducts a survey to determine if his customers would prefer longer hours. Which survey method would likely produce the most representative sample?

- A** choose every tenth customer who comes in
- B** choose every customer who comes in within 10 minutes of closing
- C** choose every customer who requests longer hours
- D** choose every customer who is waiting outside the store when it opens

Answer A is correct.

7.SP.2: Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. For example, estimate the mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be.

Abbas recorded the types of drinks some randomly-selected people purchased at a convenience store over two days.

	Sports Drinks	Other Beverages
Day 1	30	20
Day 2	28	22

Which statements are best supported by the data? Mark all that apply.

- A** If 150 drinks are sold, about 84 would be sports drinks.
- B** If 150 drinks are sold, about 58 would be sports drinks.
- C** If 200 drinks are sold, about 60 would be sports drinks.
- D** If 200 drinks are sold, about 85 would be other beverages.
- E** If 250 drinks are sold, about 105 would be other beverages.

Answers A, D, and E are correct.

7.SP.5: Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around $\frac{1}{2}$ indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.

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According to a weather report, there is a 5% chance of snow and a 100% chance of freezing temperatures in the mountains tomorrow.

Part A

Which word best describes the likelihood of snow in the mountains tomorrow?

- A** unlikely
- B** likely
- C** certain
- D** impossible

Part B

Which word best describes the likelihood of freezing temperatures in the mountains tomorrow?

- A** unlikely
- B** likely
- C** certain
- D** impossible

Part A: Answer A is correct.

Part B: Answer C is correct.

7.SP.7b: Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy. Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?

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A traffic engineer records a sample of the types of vehicles that cross a bridge. She counts 112 passenger cars, 18 light trucks, and 20 heavy trucks.

Part A

What is the approximate probability that a random vehicle crossing the bridge is a passenger car?

- A** 66%
- B** 75%
- C** 84%
- D** 93%

Part B

What is the approximate probability that a random vehicle crossing the bridge is a light truck?

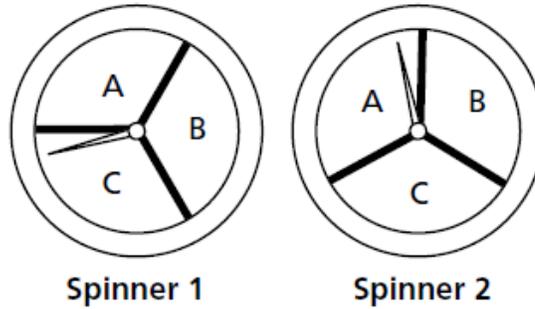
- A** 6%
- B** 12%
- C** 14%
- D** 16%

Part A: Answer B is correct.

Part B: Answer B is correct.

7.SP.8b: Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation. Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., “rolling double sixes”), identify the outcomes in the sample space which compose the event.

Na'ilah is spinning 2 fair spinners.



Which table shows all the possible outcomes of spinning both spinners?

A

Spinner 1	A	B	C	A	B	C	A	B	C
Spinner 2	A	A	A	B	B	B	C	C	C

B

Spinner 1	A	A	B	B	C	C
Spinner 2	B	C	A	C	A	B

C

Spinner 1	A	B	C	C	A	B	B	C	A
Spinner 2	B	C	A	A	B	C	C	A	B

D

Spinner 1	A	B	C
Spinner 2	A	B	C

Answer A is correct.

7.SP.8c: Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation. Design and use a simulation to generate frequencies for compound events. For example, use random digits as a simulation tool to approximate the answer to the question: If 40% of donors have type A blood, what is the probability that it will take at least 4 donors to find one with type A blood?

Greta learned that about 10% of people are left-handed. She ran 10 different simulations using random digits to find the probability that there is a left-handed person in a group of 5 randomly selected people. In the table of Greta's results below, 0 represents a left-handed person and 1 through 9 represent a right-handed person. Each row represents one simulation of 5 people.

3	1	4	9	6
5	6	9	6	7
5	3	2	6	8
1	4	4	2	8
9	4	4	2	6
6	8	7	4	9
6	3	4	8	8
2	7	4	4	2
0	3	6	1	6
0	5	2	0	9

Based on Greta's simulations, what is the probability that in a group of 5 people, at least 1 person will be left-handed?

- A** 6%
- B** 20%
- C** 30%
- D** 60%

Answer B is correct.