Florida Standards Assessments

Grade 7

FSA Mathematics

Practice Test Answer Key
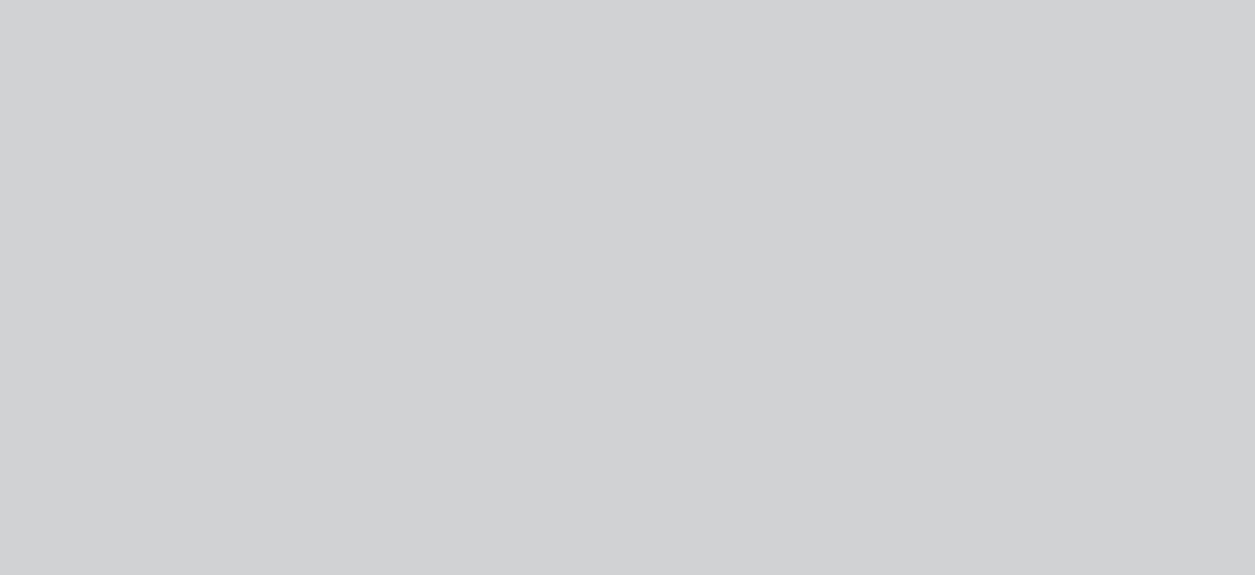
The Grade 7 FSA Mathematics Practice Test Answer Key provides the correct response(s) for each item on the practice test. The practice questions and answers are not intended to demonstrate the length of the actual test, nor should student responses be used as an indicator of student performance on the actual test.
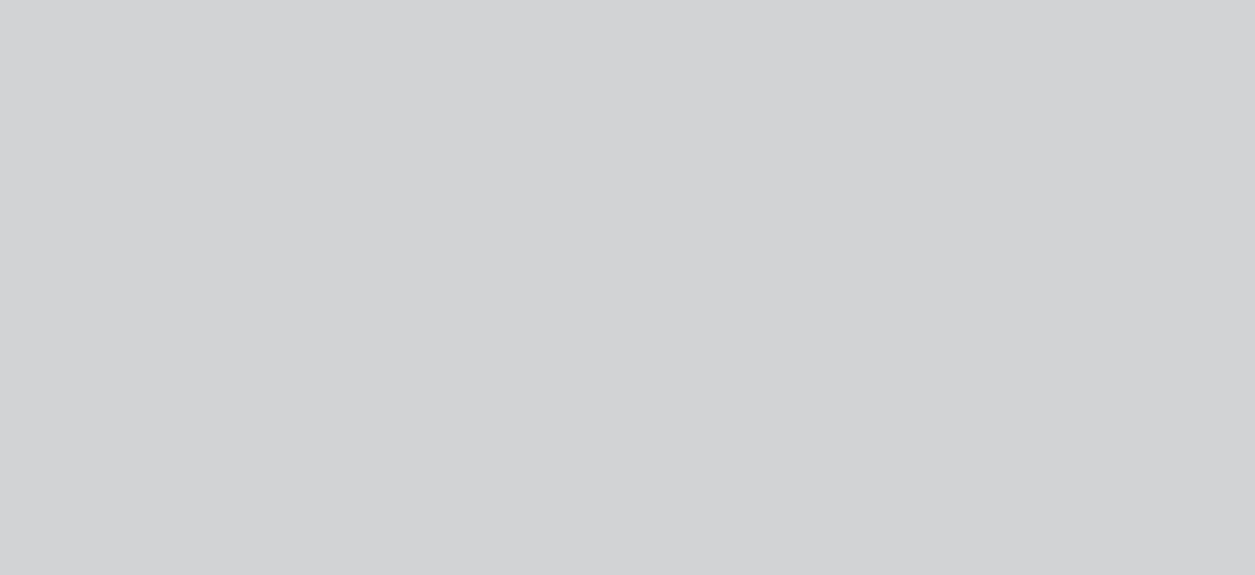
Session 1

1. The local weather report states that there is more than a $\frac{2}{3}$ chance of rain for Saturday.

   What is the likelihood that it will rain on Saturday?

   Ⓐ   It is certain to rain on Saturday.

   ●   It is likely to rain on Saturday.

   Ⓒ   It is neither likely nor unlikely to rain on Saturday.

   Ⓓ   It is impossible that it will rain on Saturday.

Go On

2. The cost of a barrel of beans, *b*, fluctuates by 17% in both directions during a three-month period.

Match each verbal description of the high and low cost of a barrel of beans with all equivalent expressions.

	$b + 0.17b$	$b - 0.17b$	$b - 1.17b$	$-0.17b$	$0.83b$	$1.17b$
b is increased by 17%	☑	☐	☐	☐	☐	☑
b is decreased by 17%	☐	☑	☐	☐	☑	☐

Go On

3. A spinner is divided into blue, green, and red parts. George spins the spinner 300 times. A table of outcomes is shown.

Part	Times Spun
Blue	91
Green	107
Red	102

Based on this data, what is the estimated probability of the spinner landing on red?

0.34
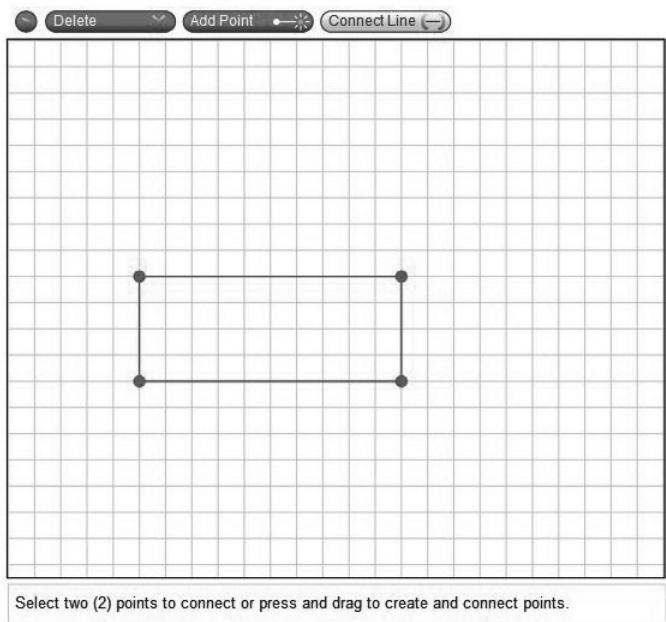
1	2	3
4	5	6
7	8	9
	0	
.	-	□/□

Other correct responses: *102/300*

Go On

4.

Use the Connect Line tool to draw a quadrilateral that has exactly two lines of symmetry.

Other correct responses: *a rhombus*

Go On

5. The total change in the price of a certain brand of cereal from 2008 to 2012 was -$0.20.

Complete the table to show possible price changes in 2010 and 2012.

Year	Change in Dollars
2008	+0.20
2009	+0.30
2010	-0.40
2011	-0.20
2012	-0.10
Total	-0.20

Other correct responses: *any two values such that their sum is −0.50*

6. What is $\frac{2}{3}$ written as a decimal?

- Ⓐ 0.23
- Ⓑ 0.6
- ● 0.$\overline{6}$
- Ⓓ 1.5

7. Two classes have a trivia contest. Each student is asked eight questions and is scored on the number of correct answers. The teachers create a dot plot of the scores from 15 students from Class A and 14 students from Class B, as shown.

Another score is added to the plot for Class B to make the median of the two data sets equal.

Click on the dot plot to show where this score could have been added.
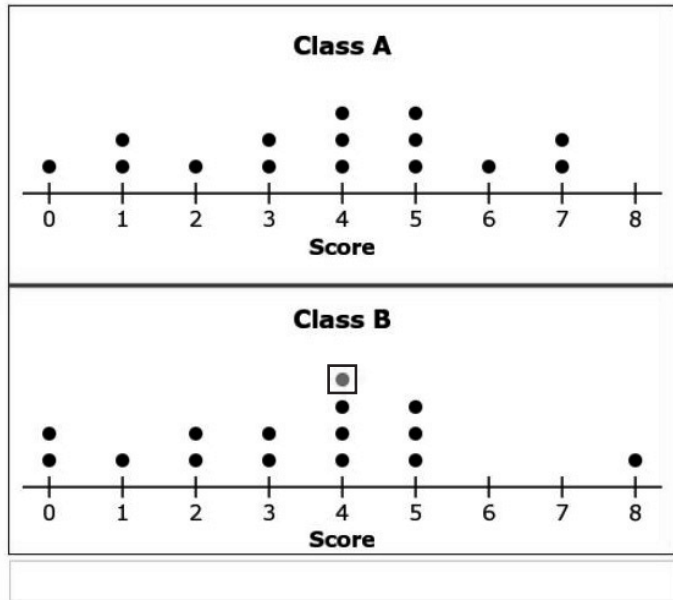
Other correct responses: *any point added to a score of 4 or higher*

Go On

8. Tony has a bucket filled with green, blue, yellow, and red markers. He removes 3 markers from the bucket, with replacement.

Select all the outcomes that are possible.

- ☑ All of the markers removed are the same color.
- ☐ Only 1 marker of each color is removed.
- ☑ There are equal numbers of green and blue markers removed.
- ☑ There are equal numbers of red and yellow markers removed.
- ☐ There are only 2 colors of markers removed, and they were removed an equal number of times.

Go On

**9.** An expression is shown, where $a < 0$ and $c > 0$.

$a + b = c$

Drag the two points to the number line to show possible locations of a and b.
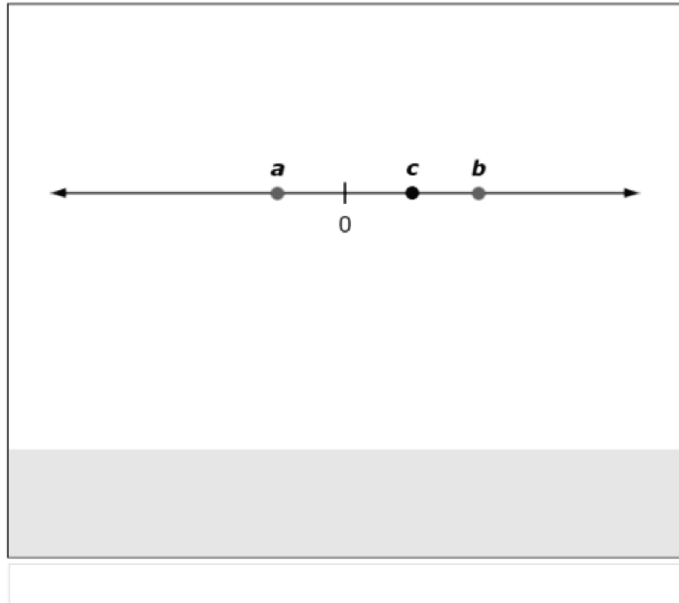
Other correct responses: *any location for a and b such that b is greater than c and the distance between a and 0 equals the distance between b and c*

Go On

10. Survey data involving two random samples of students at a law school are shown. The surveys were taken comparing the age of students in 1990 to the age of students in 2014.

Age of Law School Students
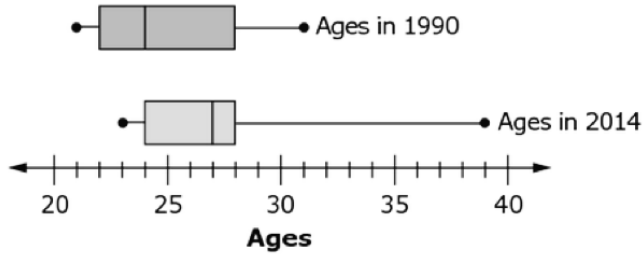
Select all the statements that are true about the two samples of students.

- In 2014, the oldest student was 28 years old.

- In 2014, 50% of students were over 28 years old.

- In 1990, 75% of students were at least 24 years old.

- In 2014, the median age of students was greater than the median age in 1990.

- In 1990, there was a 10-year age difference between the oldest and youngest students.
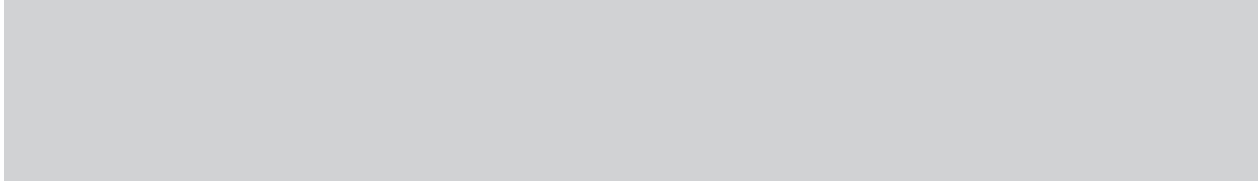
This is the end of Session 1.
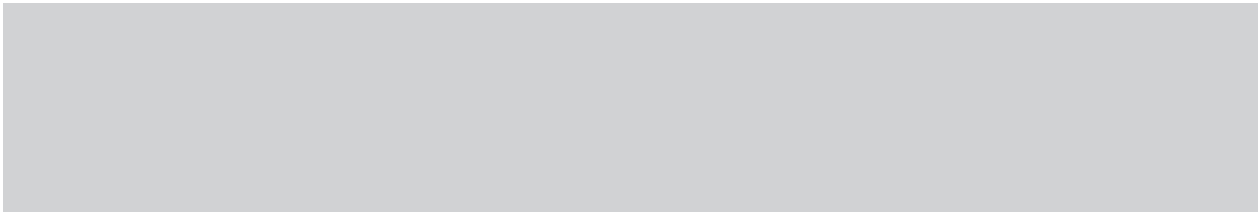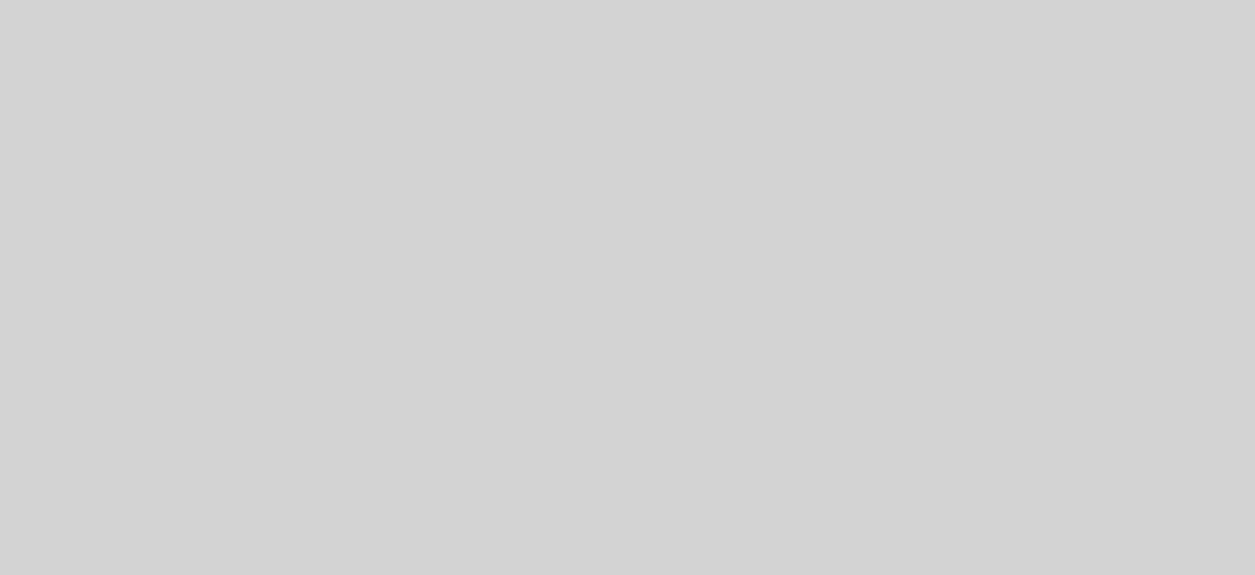
Session 2
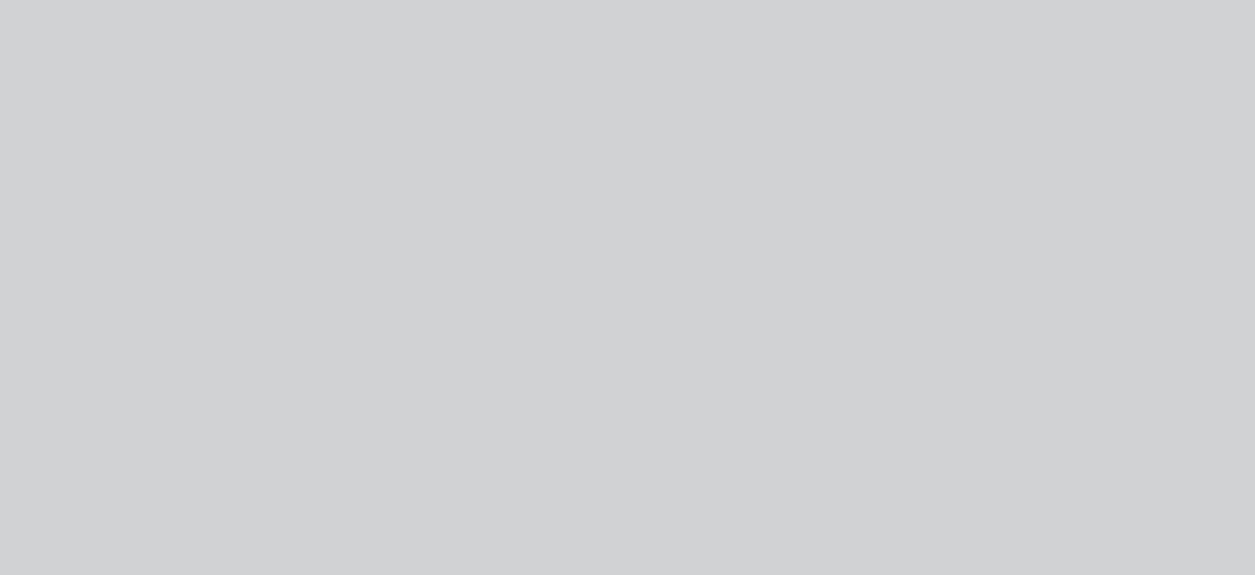
11. A company has three sales departments (local, regional, and national) at each of several locations across the United States. Each local sales department has 120 employees. The company wants to survey its employees to determine the most effective sales method.

Which sample should the company use to arrive at the most reliable conclusion?

Ⓐ   24 employees from one sales department at one location

Ⓑ   24 employees from one sales department at each location

Ⓒ   24 employees from each sales department at one location

●   24 employees from each sales department at each location

12. Ads Galore makes posters with standard dimensions of $8\frac{1}{2}$ inches by 11 inches as shown.

11 inches

$8\frac{1}{2}$ inches
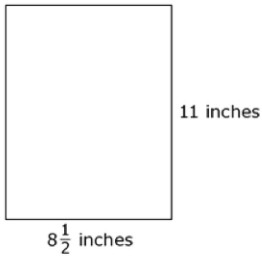
Both the length and width of the poster may vary by $\frac{1}{20}$%, according to Ads Galore's regulations.

What is the smallest acceptable area of one poster, rounded to the nearest thousandth of a square inch?

93.407

1	2	3
4	5	6
7	8	9
	0	
.	-	□/□

Go On

13. The dimensions of a rectangular pool are 24.5 feet by 13 feet. The depth of the water is 4 feet. Each cubic foot contains 7.48 gallons of water.

How many gallons of water, to the nearest tenth, are needed to fill the pool to 80% capacity?

7623.6

1	2	3
4	5	6
7	8	9
	0	
.	-	▯/▯

Go On

14. David and Tonya each cut a cylinder in half. The cross-section that results from David's cut is a rectangle. The cross-section that results from Tonya's cut is a circle.

How was Tonya's cut different from David's cut?

Type your answer in the space provided.

Tonya cut her cylinder horizontally, and David cut his cylinder vertically.

Go On

15. The table shows the amount of snowfall, in inches, during a snowstorm in Huntsville after certain numbers of hours.

Snowfall (inches)	Time (hours)
5	6
7.5	9
12.5	15

Complete the sentence about the relationship between the amount of snowfall and the number of hours.

According to the table, the amount of snowfall [is proportional ▾] to the number of hours because snow [is not present ▾] on the ground before the snowstorm and the snowfall [increases by the same amount ▾] each hour.

16. The circumference of a circle is 53.38 centimeters.

What is the area in square centimeters? Use 3.14 for π.

226.865

1	2	3
4	5	6
7	8	9
	0	
.	-	$\frac{\square}{\square}$

Go On

17. A recipe calls for $\frac{2}{3}$ cup of sugar for every $\frac{1}{2}$ teaspoon of vanilla.
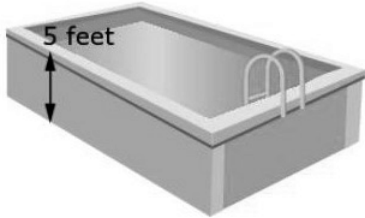
What is the unit rate of cups per teaspoon?

$$\frac{4}{3}$$

1	2	3
4	5	6
7	8	9
	0	
.	-	▯/▯

Go On

18.

Mitzi has a rectangular swimming pool. She fills it with water to a depth of 5 feet. The water has a volume of 1200 cubic feet.

5 feet

Use the Connect Line tool to draw a rectangle that represents the possible dimensions of the swimming pool.

| Delete ⌄ | Add Point •—✳ | Connect Line ⟷ |

⊢—⊣ = 2 feet

Select two (2) points to connect or press and drag to create and connect points.

Other correct responses: *any rectangle with an area of 240 square feet*

19. Kara mixes different colors of paint to create new colors. The table shows the amount of paint Kara mixes per batch.

Ounces of Paint

Batch	Blue	White	Yellow
1	2	1.5	1
2	5	3.5	2.5
3	7	5.5	3.5
4	6	4.5	3
5	4	3	2
6	3	2	1.5

Select all the batches that will create the same color as the first batch.

- ☐ Batch 2
- ☐ Batch 3
- ☑ Batch 4
- ☑ Batch 5
- ☐ Batch 6

Go On

20. An expression is shown.

$$2\left(\frac{3}{5}x + 3\right) - \left(\frac{2}{3}x - 1\right)$$

Create an equivalent expression without parentheses.

$$\frac{8}{15}x + 7$$

1	2	3	x				
4	5	6	+	-	•	÷	
7	8	9	<	≤	=	≥	>
	0		$\Box^{\Box}$	( )	||	$\sqrt{\Box}$	$\sqrt[\Box]{\Box}$	π
.	-	$\frac{\Box}{\Box}$					

***Other correct responses:*** *any equivalent expression without parentheses*

Go On

21. A bag contains 4 red, 4 blue, 4 green, and 4 yellow marbles. A marble is randomly pulled from the bag and replaced seven times. The table shows the outcome of the experiment.

Trial	Outcome
1	Yellow
2	Blue
3	Yellow
4	Red
5	Blue
6	Yellow
7	Yellow

Which marble color's observed frequency is closest to its expected frequency?

Ⓐ red

● blue

Ⓒ green

Ⓓ yellow

22. A figure is shown.
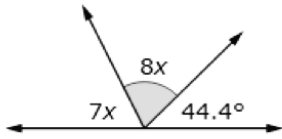
What is the measure, in degrees, of the highlighted angle?

72.32

←	→	↶	↷	⌫

1	2	3
4	5	6
7	8	9
	0	
.	-	□/□

23. At her job, Jessie earns $9.50 per hour. She also earns a $60 bonus every month.

Jessie needs to earn more than $460 every month.

A. Create an inequality that represents this situation, where *h* represents the number of hours that Jessie needs to work in a month in order to earn more than $460.

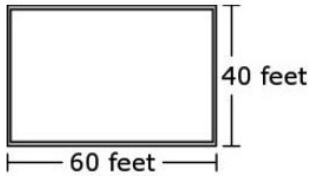B. Enter the minimum whole number of hours Jessie would have to work to earn $460 in a month.

A. $9.5h+60>460$

B. 43

1	2	3	h				
4	5	6	+	-	•	÷	
7	8	9	<	≤	=	≥	>
	0		$\square^\square$	( )	||	$\sqrt{\square}$	$\sqrt[\square]{\square}$	π
.	-	$\frac{\square}{\square}$					

Other correct responses: *for Part A, 460 < 9.5h + 60 or any equivalent inequality*

24.

Eric wants to create a scale drawing of a house.

40 feet

60 feet

The scale drawing needs to fit on a piece of paper that is 6 inches wide. The drawing itself must be at least 3 inches wide.

A. Drag numbers into the box to show an appropriate scale for the drawing.

B. Use the Connect Line tool to create a drawing based on the scale you chose in Part A.

0
1
2
3
4
5
6
7
8
9

Delete   Add Point   Connect Line

A. Scale   ☐ = 1 0 feet
1 inch

B. Scale Drawing

1 inch

Select two (2) points to connect or press and drag to create and connect points.

Other correct responses: *any combination of a scale and a scale drawing such that the drawing is at least 3 inches wide and length times width yields the correct area*

Go On

25. A company plans to ship 2,000 packages of chocolate. The company randomly selects 100 packages and finds that five packages have an incorrect weight.

Based on this data, how many packages out of the 2,000 should be predicted to have an incorrect weight?

100

1	2	3
4	5	6
7	8	9
	0	
.	-	▯/▯

Go On

26. This question has **three** parts.

Vanessa has added 40 gallons of water to her new fish pond in her backyard and wants to add more water. Her pond can hold a maximum of 256 gallons. Her garden hose can add 48 gallons of water in 2 minutes.

Part A. Create an inequality to represent the number of minutes, m, Vanessa could run the garden hose to add more water to the pond without adding the maximum amount in case of rain.

$$24m+40<256$$

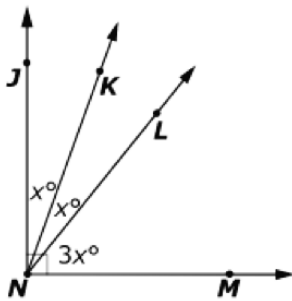| 1 | 2 | 3 | m | | | |
4	5	6	+	-	•	÷
7	8	9	<	≤	=	≥	>
	0		$\Box^\Box$	( )	||	$\sqrt{\Box}$	$\sqrt[\Box]{\Box}$	π
	-	$\frac{\Box}{\Box}$				

Other correct responses: *any equivalent inequality*

Part B. Drag the appropriate arrow and circle to the number line to graph the solution to the inequality from Part A.

Number of Minutes
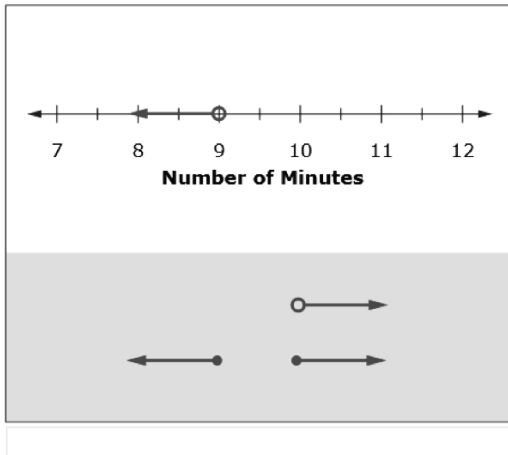
Part C. Select all the amounts of time, in minutes, that Vanessa could leave the hose running.

☑ 7 minutes

☑ 7.5 minutes

☐ 9 minutes

☐ 9.75 minutes

☐ 10.3 minutes

☐ 12 minutes

Go On

27. A diagram is shown, with angles labeled in degrees (°).

Complete the sentences about the diagram.

A. The equation $x + x + 3x = 90$ ⌨ can be used to solve for x.
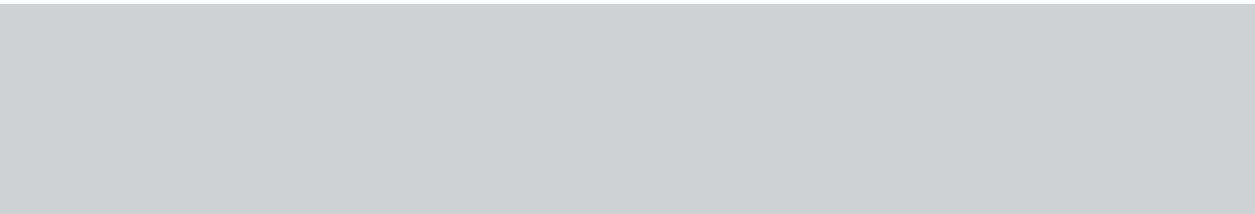
Other correct responses: *Any equivalent equation*

B. The measure of ∠*LNM*, in degrees, is 54 ⌨ .

Other correct responses: *Any equivalent value*

Go On

This is the end of Session 2.

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