

**No Calculator can be used for 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?

- (A) It is certain to rain on Saturday.
  - (B) It is likely to rain on Saturday.
  - (C) It is neither likely nor unlikely to rain on Saturday.
  - (D) It is impossible that it will rain on Saturday.
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><math>b</math> is increased by 17%</b>	(A)	(B)	(C)	(D)	(E)	(F)
<b><math>b</math> is decreased by 17%</b>	(G)	(H)	(I)	(J)	(K)	(L)

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?

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

- (A) 0.23
- (B) 0.6
- (C)  $0.\overline{6}$
- (D) 1.5

## Session 2

## FSA Mathematics Practice Test Questions

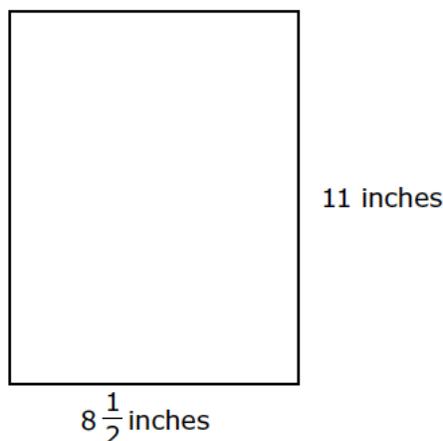
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### A Calculator can be used for Session 1.

5. 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?

- (A) 24 employees from one sales department at one location
  - (B) 24 employees from one sales department at each location
  - (C) 24 employees from each sales department at one location
  - (D) 24 employees from each sales department at each location
6. Ads Galore makes posters with standard dimensions of  $8\frac{1}{2}$  inches by 11 inches as shown.



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?

7. 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?

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.

9. The circumference of a circle is 53.38 centimeters.

What is the area in square centimeters? Use 3.14 for  $\pi$ .

10. 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?

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

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.

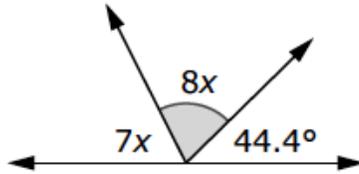
- (A) Batch 2
  - (B) Batch 3
  - (C) Batch 4
  - (D) Batch 5
  - (E) Batch 6
12. A bag contains 4 red, 4 blue, 4 green, and 4 yellow marbles. A marble is randomly pulled from the bag and replaced seven times. The table shows the outcome of the experiment.

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?

- (A) red
- (B) blue
- (C) green
- (D) yellow

13. A figure is shown.



What is the measure, in degrees, of the shaded angle?

14. 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?