

Grade 4 **FSA** Mathematics

The purpose of these practice test materials is to orient teachers and students to the types of questions on paper-based FSA tests. By using these materials, students will become familiar with the types of items and response formats they may see on a paper-based 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. The practice test is not intended to guide classroom instruction.

Directions for Answering the Mathematics Practice Test Questions

If you don't know how to work a problem, ask your teacher to explain it to you. Your teacher has the answers to the practice test questions.

You may need formulas and conversions to help you solve some of the problems. You may refer to the Reference Sheet on page 5 as often as you like.

Use the space in your Mathematics Practice Test Questions booklet to do your work.

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Directions for Completing the Response Grids

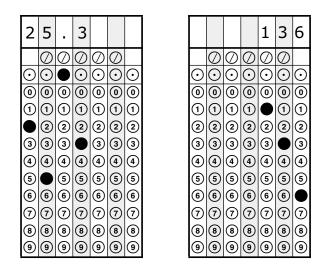
- 1. Work the problem and find an answer.
- 2. Write your answer in the answer boxes at the top of the grid.
 - Write your answer with the first digit in the left answer box OR with the last digit in the right answer box.
 - Write only one digit or symbol in each answer box. Do NOT leave a blank answer box in the middle of an answer.
 - Be sure to write a decimal point or fraction bar in the answer box if it is a part of the answer.
- 3. Fill in a bubble under each box in which you wrote your answer.
 - Fill in one and ONLY one bubble for each answer box. Do NOT fill in a bubble under an unused answer box.
 - Fill in each bubble by making a solid mark that completely fills the circle.
 - You MUST fill in the bubbles accurately to receive credit for your answer.

| ≻Ans | | | | | | | | |
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| | | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Nur | | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| | | $\overline{\mathcal{O}}$ | 1 | 1 | $\overline{\mathcal{O}}$ | 1 | $\overline{\mathcal{O}}$ | $\overline{\mathcal{O}}$ |
| | | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| | - | 9 | 9 | 9 | 9 | 9 | 9 | 9 |

Answer boxes Fraction bar Decimal point

Number bubbles

When a percent is required to answer a question, do NOT convert the percent to its decimal or fractional equivalent. Grid in the percent value without the % symbol. Do the same with dollar amounts.

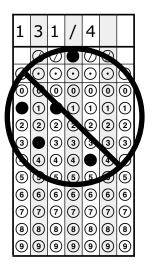


Do NOT write a mixed number, such as $13\frac{1}{4}$, in the answer boxes. Change the mixed number to an equivalent fraction, such as $\frac{53}{4}$, or to an equivalent decimal, such as 13.25. Do not try to fill in $13\frac{1}{4}$, as it would be read as $\frac{131}{4}$ and would be counted wrong.

CORRECT

INCORRECT

| _ | | | | | | | | _ | | | | | | |
|--------------------------|--------------------------|--------------------------|-----------|--------------------------|--------------------------|---------|----|---------|--------------------------|-----------|--------------------------|--------------------------|--------------------------|--------------------------|
| 5 | 3 | / | 4 | | | | | 1 | 3 | • | 2 | 5 | | |
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| 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | OR | 2 | 2 | 2 | | 2 | 2 | 2 |
| 3 | | 3 | 3 | 3 | 3 | 3 | | 3 | | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | | 4 | 4 | 4 | | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 5 | 5 | 5 | 5 | 5 | 5 | | 5 | 5 | 5 | 5 | | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| $\overline{\mathcal{O}}$ | $\overline{\mathcal{O}}$ | $\overline{\mathcal{O}}$ | 1 | $\overline{\mathcal{O}}$ | $\overline{\mathcal{O}}$ | 1 | | 1 | $\overline{\mathcal{O}}$ | 1 | $\overline{\mathcal{O}}$ | $\overline{\mathcal{O}}$ | $\overline{\mathcal{O}}$ | $\overline{\mathcal{O}}$ |
| 8 | 8 | 8 | 8 | 8 | 8 | 8 | | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 | | 9 | 9 | 9 | 9 | 9 | 9 | 9 |



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Grade 4 FSA Mathematics Reference Sheet

Customary Conversions

1 foot = 12 inches 1 yard = 3 feet 1 mile = 5,280 feet 1 mile = 1,760 yards 1 cup = 8 fluid ounces 1 pint = 2 cups 1 quart = 2 pints 1 gallon = 4 quarts 1 pound = 16 ounces 1 ton = 2,000 pounds

Metric Conversions

1 meter = 100 centimeters 1 meter = 1000 millimeters

- 1 kilometer = 1000 meters
- 1 liter = 1000 milliliters

1 gram = 1000 milligrams 1 kilogram = 1000 grams

Time Conversions

1 minute = 60 seconds 1 hour = 60 minutes 1 day = 24 hours 1 year = 365 days 1 year = 52 weeks

Formulas

A = lw

P=2l+2w

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Session 1

Page 7

Use the space in this booklet to do your work. For multiple-choice items, fill in <u>one</u> bubble for the correct answer. For matching items and multiselect items, fill in the bubbles for <u>all</u> of the correct answers. For items with response grids, refer to the Directions for Completing the Response Grids on pages 3 and 4. For equation items, open-response items, and table items, write your answer in the space provided. If you change your answer, be sure to erase completely. Calculators are NOT permitted for Session 1 of this practice test.

- 1. How many times greater is the value of 5 in 2,573 than the value of 5 in 6,459?
 - A 10
 - B 50
 - © 100
 - D 500

2. A rectangle has a length of 11 feet and a perimeter of 38 feet.

What is the width, in feet, of the rectangle?

| | 0 | 6 | 0 | 6 | 0 | |
|---------|--------------|--------------|--------------|--------------|--------------|---------|
| | \heartsuit | \heartsuit | \heartsuit | \heartsuit | \heartsuit | |
| \odot | \odot | \odot | \odot | \odot | \odot | \odot |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 7 | 1 | 1 | 1 | 1 | 1 | 7 |
| 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 |



3. Determine whether each number is prime or composite.

| | Prime | Composite |
|----|--------------|-----------|
| 16 | (\mbox{A}) | B |
| 13 | ٩ | D |
| 12 | E | F |
| 9 | G | H |
| 7 | | (L) |

4. What is the value of $1\frac{3}{10}$ in decimal form?

| | \bigcirc | Ø | \bigcirc | \bigcirc | \bigcirc | |
|---------|------------|--------------------|------------|--------------------|--------------------|---------|
| \odot | \odot | $\overline{\odot}$ | \odot | $\overline{\odot}$ | $\overline{\odot}$ | \odot |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 7 | 1 | 1 | 1 | 1 | 1 | 1 |
| 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 |



Session 1

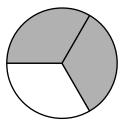
5. Joanna has \$54. She is shopping for umbrellas that cost \$12 each. She writes the following equation to model the situation.

$$54 \div 12 = 4 r 6$$

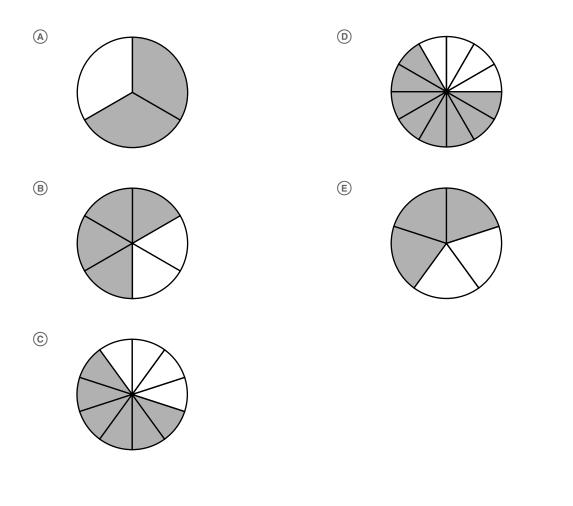
What does the number 6 represent about Joanna's money?

6. Kari represented a fraction by shading parts of the model shown.

Kari's Fraction Model



Select all the models that have been shaded to represent fractions equivalent to Kari's fraction.





7. Original numbers are rounded to the nearest hundred and to the nearest thousand. The original numbers are different from all the rounded numbers in the table.

Original
NumberRounded
to the
Nearest
HundredRounded
to the
Nearest
Thousand13,60014,0002,4002,000

Complete the table with possible original numbers.

- **8.** Which statement represents $45 = 5 \times 9$?
 - A Rosie collected 5 toy cars each year for 9 years.
 - ^(B) Rosie collected 5 toy cars one year and 9 toy cars the next year.
 - © Rosie had a collection of 45 toy cars and gave 9 of them away.
 - Rosie had a collection of 5 toy cars and increased the number of toy cars by 45.

- 9. Which statements correctly compare two numbers?
 - A 2,059 > 2,095
 - B 2,095 < 2,059</p>
 - © 2,059 < 2,095
 - D 2,095 > 2,059
 - € 2,059 = 2,095

10. Daniella fills a container with soil by using a bowl. The bowl holds $\frac{3}{4}$ cup of soil. Daniella uses 13 full bowls of soil to fill the container. How many cups of soil does the container hold?

| | \bigcirc | Ø | \bigcirc | Ø | \bigcirc | |
|---------|------------|--------------------|------------|--------------------|------------|---------|
| \odot | \odot | $\overline{\odot}$ | \odot | $\overline{\odot}$ | \odot | \odot |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 7 | 1 | 1 | 1 | 1 | 1 | 1 |
| 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 |



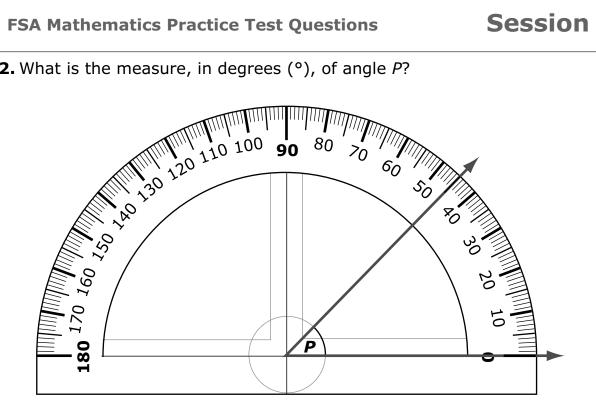
Session 1

11. Johnny has 17 marbles. Mitchell has 3 times as many marbles as Johnny.

How many marbles does Mitchell have?

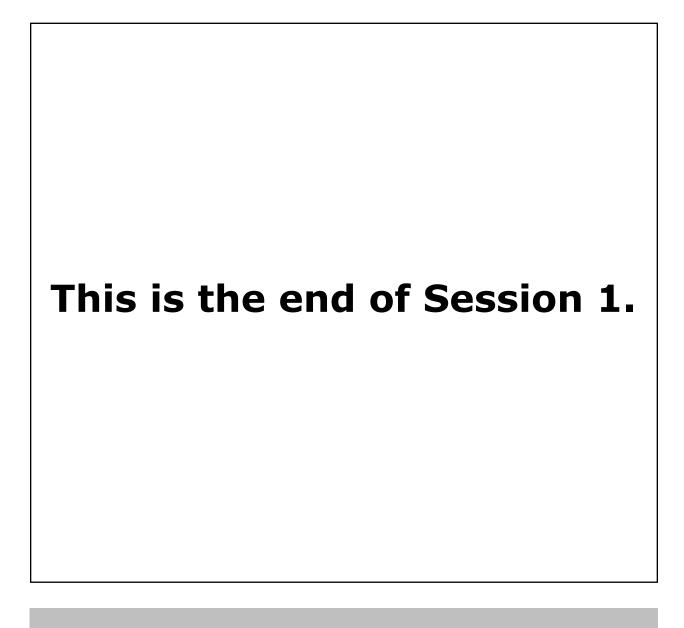
| | \oslash | \oslash | \oslash | \oslash | \oslash | |
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| 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 7 | 1 | 1 | 1 | 1 | 1 | $\overline{\mathcal{O}}$ |
| 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 |

12. What is the measure, in degrees (°), of angle *P*?



- 45° (A)
- 55° В
- \odot 135°
- D 155°



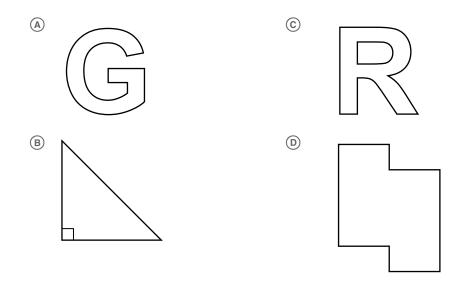


Session 2

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Use the space in this booklet to do your work. For multiple-choice items, fill in <u>one</u> bubble for the correct answer. For matching items and multiselect items, fill in the bubbles for <u>all</u> of the correct answers. For items with response grids, refer to the Directions for Completing the Response Grids on pages 3 and 4. For equation items, open-response items, and table items, write your answer in the space provided. If you change your answer, be sure to erase completely. Calculators are NOT permitted for Session 2 of this practice test.

13. Which figure has a line of symmetry?



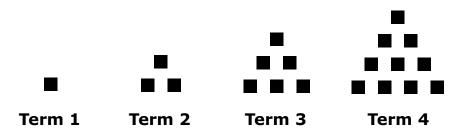
14. The table shows the height of two containers, in feet.

Complete the table to show the height of each container, in inches.

| | Height in Inches | Height in Feet |
|-------------|---------------------|-------------------|
| Container 1 | | 5 |
| Container 2 | | 3 |



15. A pattern is shown. The pattern follows the rule "add a row of squares that has 1 more square on the bottom row than the term before."

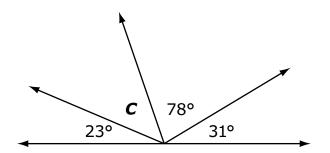


Describe how the number of total squares in each term of the pattern is related to the term's number.

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16. A diagram is shown.



A. Create an equation that can be used to find the measure of angle *C*.

B. What is the measure of angle C?

17. Select all the equations that show different ways to represent $\frac{5}{8}$.

| A | 2 8 + | $\frac{3}{8} =$ | <u>5</u> 8 | | | |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|---------------|
| B | <u>5</u> + 8 | $\frac{3}{8} =$ | <u>5</u> 8 | | | |
| C | $\frac{1}{8}$ + | $\frac{5}{8} =$ | <u>5</u> 8 | | | |
| D | $\frac{1}{8}$ + | $\frac{3}{8}$ + | $\frac{1}{8} =$ | <u>5</u> 8 | | |
| E | $\frac{1}{8}$ + | $\frac{1}{8}$ + | $\frac{1}{8}$ + | $\frac{1}{8}$ + | $\frac{1}{8} =$ | <u>5</u> 8 |

18. An addition statement is shown.

$$26, \Box 54 \\ 18,899 \\ + 12,351 \\ \overline{58,004}$$

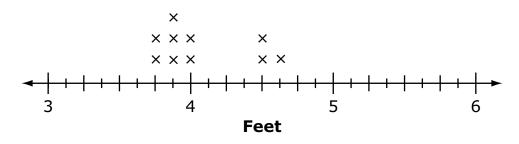
What is the missing digit that makes the addition statement true?

A) 0
B) 1
C) 7
D) 8
Page 24



19. A line plot with long jump data is given.

Long Jump Measurements



Allison jumped $\frac{3}{8}$ foot shorter than the farthest jump. How far, in feet, did Allison jump?

| | \oslash | \oslash | \oslash | \oslash | \oslash | |
|---------|-----------|-----------|-----------|-----------|-----------|---------|
| \odot | \odot | \odot | \odot | \odot | \odot | \odot |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 |



20. Select all the expressions that have a value of 32.

- ⓐ 304 ÷ 9
- ^B 259 ÷ 8
- © 224÷7
- E 100 ÷ 3



21. Melvin mows a lawn. The fraction of the lawn that Melvin has mowed so far is represented by the shaded model shown.

Melvin will mow $\frac{3}{10}$ more of the lawn before he takes his first break.

What fraction of the lawn will Melvin have mowed when he takes his first break?

| | \oslash | \oslash | \oslash | \oslash | \oslash | |
|---------|-----------|-----------|-----------|-----------|-----------|---------|
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| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 1 | 1 | 1 | 1 | 1 | 1 | 7 |
| 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 |



22. What is the product of 2,830 and 3?

| | \oslash | \oslash | Ø | \oslash | \oslash | |
|---------|-----------|-----------|---------|-----------|-----------|--------------------------|
| \odot | \odot | \odot | \odot | \odot | \odot | \odot |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 7 | 1 | 1 | 1 | 1 | 1 | $\overline{\mathcal{O}}$ |
| 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 |



23. Select >, <, or = to complete a true comparison for each pair of fractions.

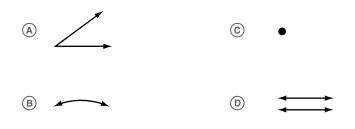
| | > | < | = |
|------------------------------------|---|---|---|
| $\frac{4}{3}$ | A | В | ٩ |
| $\frac{6}{2}$ | D | E | F |
| $\frac{3}{2}$ \Box $\frac{7}{4}$ | G | H | 1 |

24. Select all the shapes that **always** contain perpendicular sides.

- (A) obtuse triangle
- [®] acute triangle
- © right triangle
- rectangle
- 𝔅 rhombus
- F square



25. Which is an angle?







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