

LEAP 2025 Mathematics

Practice Test

Grade 5

Session 1

Directions:

Today, you will take Session 1 of the Grade 5 Mathematics Practice Test. You will not be able to use a calculator in this session.

Read each question. Then, follow the directions to answer each question. Mark your answers by circling the correct choice. If you need to change an answer, be sure to erase your first answer completely.

Some of the questions will ask you to write a response. Write your response in the space provided in your test booklet.

If you do not know the answer to a question, you may go on to the next question. If you finish early, you may review your answers and any questions you did not answer in this session **ONLY**.

GO ON ►

1. What is the value of this expression?

$$100 - [5 \times (3 + 4)]$$

Enter your answer in the box.

GO ON ►

2. Select a phrase from each list to correctly complete each sentence.

The product of $\frac{3}{5}$ and 4 is _____ 4.

less than
equal to
greater than

The product of $1\frac{1}{2}$ and 2 is _____ 2.

less than
equal to
greater than

The product of $\frac{5}{2}$ and $\frac{13}{4}$ is _____ $\frac{13}{4}$.

less than
equal to
greater than

3. Stan's lawn mower had $\frac{1}{8}$ of a gallon of gasoline in the tank. Stan started mowing and used all of the gasoline. He put $\frac{6}{10}$ of a gallon of gasoline in the tank. After he mowed, $\frac{1}{4}$ of a gallon was left in the tank.

What was the total amount of gasoline Stan used?

- A. $\frac{14}{40}$ gallon
- B. $\frac{19}{40}$ gallon
- C. $\frac{34}{40}$ gallon
- D. $\frac{39}{40}$ gallon

4. Solve.

Enter your answer in the box.

$$826 \times 3,569 =$$

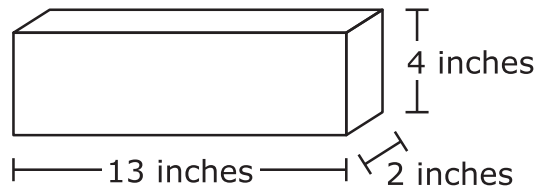
5. Mrs. Bell wrote the expanded form of a number, as shown.

$$5 \times 100 + 4 \times 10 + 6 \times 1 + 2 \times \left(\frac{1}{10}\right) + 8 \times \left(\frac{1}{1000}\right)$$

What is the number written in standard form?

Enter your answer in the box.

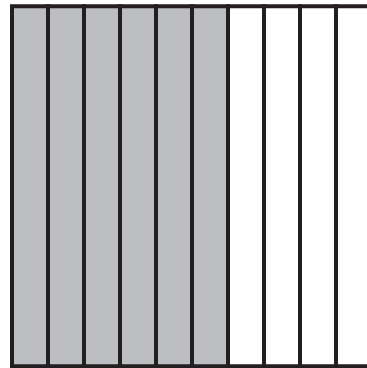
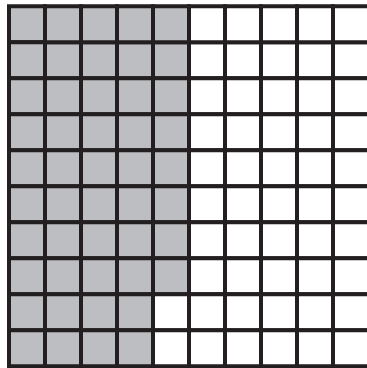
6. A rectangular prism is shown.



What is the volume, in cubic inches, of this rectangular prism?

Enter your answer in the box.

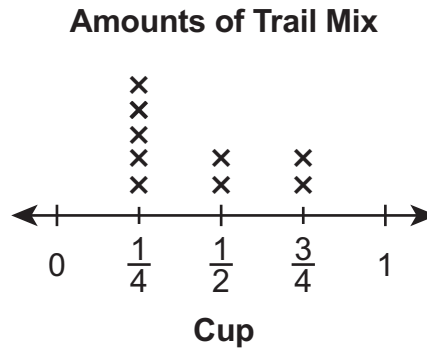
7. Find the sum of 0.48 and 0.6. You may use the models shown to help find the sum.



- A. 0.42
- B. 0.54
- C. 1.08
- D. 1.80

GO ON ►

8. Elijah ate trail mix nine different times. Each X on the line plot represents an amount that he ate.



How much total trail mix, in cups, did Elijah eat?

- A. $\frac{9}{2}$
- B. $\frac{15}{2}$
- C. $\frac{9}{4}$
- D. $\frac{15}{4}$

9. Kurt drew a rectangular maze with a length of $\frac{3}{4}$ foot and a width of $\frac{5}{12}$ foot.

What is the area, in square feet, of Kurt's maze?

- A. $\frac{15}{48}$
- B. $\frac{8}{16}$
- C. $\frac{20}{36}$
- D. $\frac{15}{16}$

10. Write the categories in the boxes to complete the diagram that shows the relationship among the figures listed. Each category will be used only once.

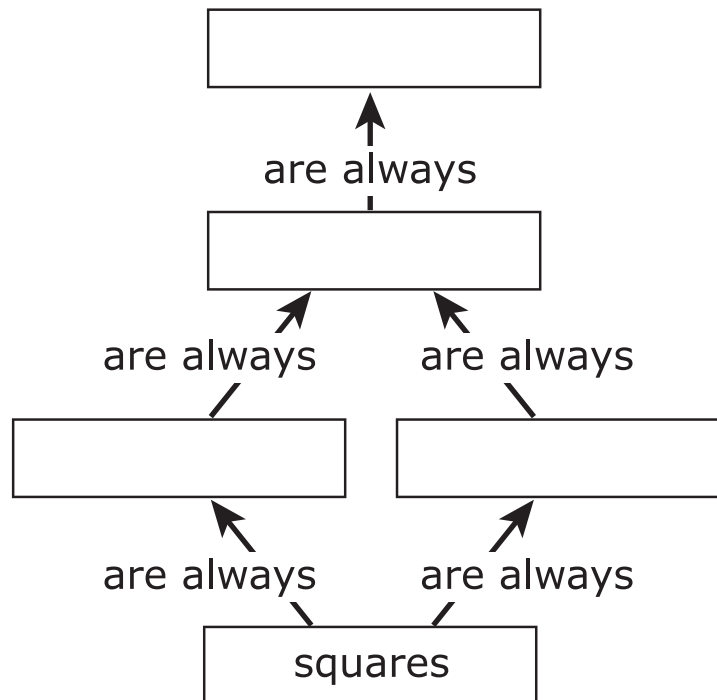
Categories:

rhombuses

rectangles

parallelograms

quadrilaterals



11. Which **two** statements about rounding decimals are correct?

- A. The number 5.066 rounded to the nearest hundredth is 5.07.
- B. The number 5.074 rounded to the nearest hundredth is 5.08.
- C. The number 5.117 rounded to the nearest hundredth is 5.10.
- D. The number 5.108 rounded to the nearest hundredth is 5.11.
- E. The number 5.025 rounded to the nearest hundredth is 5.02.

GO ON ►

12. Katie went to a craft store to purchase the supplies she needed to make two types of jewelry. This table shows the costs of the supplies Katie needed.

Costs of Supplies

Item	Cost per Item
bead	\$0.05
charm	\$0.45

This table shows the supplies needed to make each piece of jewelry.

Supplies Needed

Type of Jewelry	Beads	Charms
bracelet	25	4
necklace	48	1

Katie purchased the exact amount of supplies to make 1 bracelet and 2 necklaces.

Part A

Write an expression to determine the cost of supplies to make 1 bracelet.

Enter your expression in the box provided.

Part B

Write an expression to determine the cost of supplies to make 2 necklaces.

Enter your expression in the box provided.

Part C

Katie started with \$40. How much money did she have left after purchasing the supplies?

Enter your answer in the box provided.

GO ON ►

- 13.** Each ticket for a concert cost \$14. The total amount of ticket sales for the concert was \$8,792. How many tickets were sold?
- A. 556
 - B. 628
 - C. 793
 - D. 858

- 14.** There are two tanks at the aquarium, Tank A and Tank B. Each tank has two sections.

Part A

The volume of one section of Tank A is 24 cubic feet. The volume of the other section of Tank A is 96 cubic feet.

What is the total volume, in cubic feet, of Tank A?

- A. 4
- B. 72
- C. 120
- D. 2,304

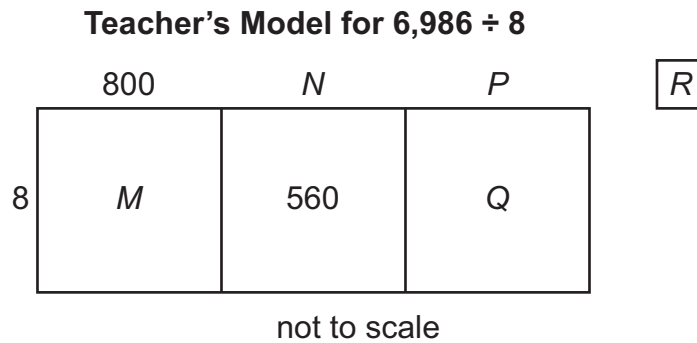
Part B

Tank B has the same volume as Tank A.

The volume of one section of Tank B is 45 cubic feet. What is the volume, in cubic feet, of the other section of Tank B?

Enter your answer in the box.

15. A teacher drew an area model to find the value of $6,986 \div 8$.



- Determine the number that each letter in the model represents and explain each of your answers.
- Write the quotient and remainder for $6,986 \div 8$.
- Explain how to use multiplication to check that the quotient is correct. You may show your work in your explanation.

Enter your answers and your explanations in the box provided.



NO TEST MATERIALS

Session 2

Directions:

Today, you will take Session 2 of the Grade 5 Mathematics Practice Test. You will not be able to use a calculator in this session.

Read each question. Then, follow the directions to answer each question. Mark your answers by circling the correct choice. If you need to change an answer, be sure to erase your first answer completely.

Some of the questions will ask you to write a response. Write your response in the space provided in your test booklet.

If you do not know the answer to a question, you may go on to the next question. If you finish early, you may review your answers and any questions you did not answer in this session **ONLY**.

GO ON ►

- 16.** One student drew a square. Another student drew a rhombus that was not a square.

Select the **three** properties that both figures have.

- A. They have four right angles.
- B. They have four sides that are the same length.
- C. They have two pairs of parallel sides.
- D. They have opposite angles that are the same measure.
- E. They have four angles that are the same measure.

17. Which equation shows how to use equivalent fractions to evaluate $\frac{7}{6} - \frac{4}{5}$?

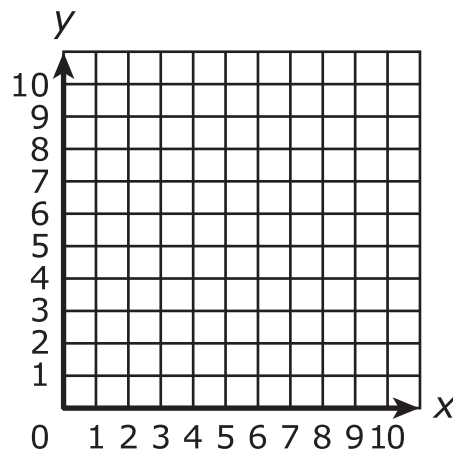
A. $\frac{7}{6} - \frac{4}{5} = \frac{7}{11} - \frac{4}{11}$

B. $\frac{7}{6} - \frac{4}{5} = \frac{35}{11} - \frac{24}{11}$

C. $\frac{7}{6} - \frac{4}{5} = \frac{7}{30} - \frac{4}{30}$

D. $\frac{7}{6} - \frac{4}{5} = \frac{35}{30} - \frac{24}{30}$

18. A coordinate plane is shown.



Which of these is a correct process for plotting the point (3, 6) on the coordinate plane?

- A. Start at the origin. Move 3 units up the y -axis, and then move 6 units to the right. Plot the point there.
- B. Start at the top of the y -axis. Move 3 units down the y -axis, and then move 6 units to the right. Plot the point there.
- C. Start at the origin. Move 3 units to the right on the x -axis, and then move 6 units up. Plot the point there.
- D. Start at the top of the y -axis. Move 3 units to the right, and then move 6 units down. Plot the point there.

GO ON ►

19. Two rules for creating number patterns are given below. Each rule begins with a number called the *input* and creates a number called the *output*.

Rule 1

Multiply the input by 2. Then add 3 to the result to get the output.

Rule 2

Multiply the input by 3. Then add 1 to the result to get the output.

Which input and output table works for **both** rules?

A.

Input	Output
2	7

B.

Input	Output
3	10

C.

Input	Output
4	11

D.

Input	Output
5	13

20. Len walks $\frac{3}{10}$ mile in the morning to school. He walks $\frac{2}{5}$ mile in the afternoon to a friend's house.

Len says that he walks a total of $\frac{5}{15}$ mile in the morning and afternoon.

Which **two** statements are true?

- A. Since $\frac{3}{10}$ plus $\frac{2}{5}$ is $\frac{5}{15}$, the total of $\frac{5}{15}$ is reasonable.
- B. Since $\frac{5}{15}$ is less than $\frac{2}{5}$, the total of $\frac{5}{15}$ is not reasonable.
- C. The fractions $\frac{5}{15}$, $\frac{3}{10}$, and $\frac{2}{5}$ are all less than $\frac{1}{2}$, so the total of $\frac{5}{15}$ is reasonable.
- D. The fraction $\frac{5}{15}$ is $\frac{1}{3}$, and $\frac{1}{3}$ is greater than $\frac{3}{10}$. Since $\frac{5}{15}$ is greater than one of the addends, the total of $\frac{5}{15}$ is reasonable.
- E. The fractions $\frac{3}{10}$ and $\frac{2}{5}$ are each greater than $\frac{1}{4}$, so the total must be greater than $\frac{1}{2}$. The fraction $\frac{5}{15}$ is less than $\frac{1}{2}$, so the total of $\frac{5}{15}$ is not reasonable.

21. Solve.

$$\frac{3}{4} + \frac{4}{5} - \frac{7}{10} =$$

A. $\frac{7}{20}$

B. $\frac{14}{20}$

C. $\frac{17}{20}$

D. $\frac{21}{20}$

- 22.** Enter your answer in the box.

$$0.35 \times 1.5 =$$

23. Diana works at a clothing store. She sold $\frac{1}{5}$ of the total number of green shirts on Monday and $\frac{3}{12}$ of the total number of green shirts on Tuesday.

Part A

What fraction of green shirts did Diana sell on Monday and Tuesday?

- A. $\frac{8}{13}$
- B. $\frac{4}{17}$
- C. $\frac{5}{36}$
- D. $\frac{27}{60}$

Part B

Diana sold $\frac{2}{15}$ of the total number of green shirts on Wednesday. What is the difference in the fraction of the total number of green shirts that were sold on Tuesday and Wednesday?

- A. $\frac{7}{60}$
- B. $\frac{5}{27}$
- C. $\frac{1}{3}$
- D. $\frac{1}{12}$

- 24.** Leah incorrectly added the fractions $\frac{2}{3}$, $\frac{1}{2}$, and $\frac{5}{12}$. She said that to add fractions with different denominators, you use the common denominator and add the numerators. Leah's work is shown.

$$\frac{2}{3} + \frac{1}{2} + \frac{5}{12}$$

$$\frac{2 + 1 + 5}{12}$$

$$\frac{8}{12}$$

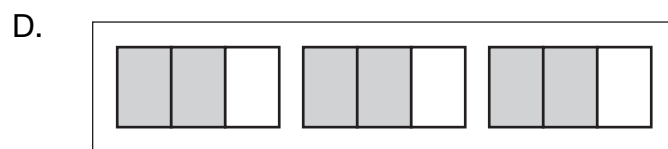
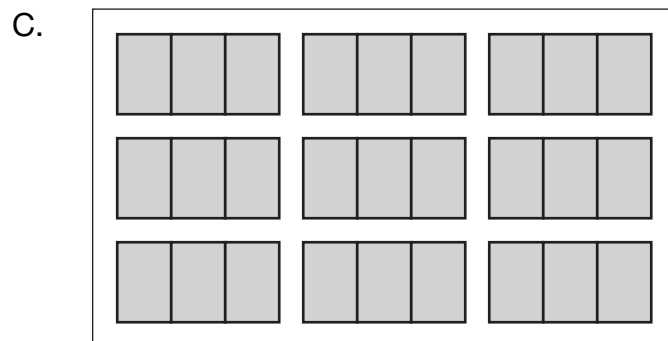
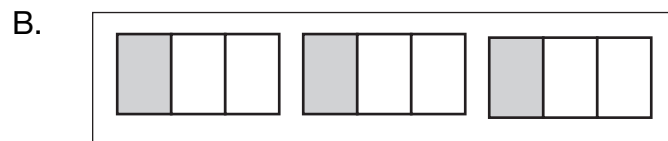
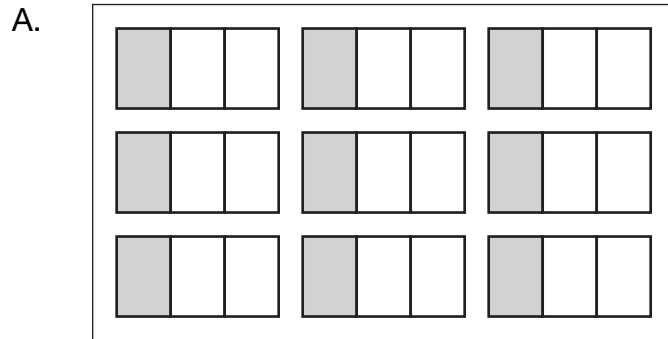
- What is Leah's mistake?
- Find the correct value of $\frac{2}{3} + \frac{1}{2} + \frac{5}{12}$.
- Show your work or explain your answer.

Enter your answers and your work or explanation in the box provided.

25. This model is shaded to show one whole.



Which set is shaded to represent the solution to $\frac{1}{3} \times 9$?



- 26.** Jim uses ribbon to make bookmarks. Jim has 9 feet of ribbon. He uses $\frac{1}{3}$ foot of ribbon to make each bookmark.

What is the total number of bookmarks Jim makes with all 9 feet of ribbon?

Enter your answer in the box.

27. Select from the lists to correctly complete each comparison.

4.408 _____ four and forty-eight thousandths

<
=
>

six hundred ninety-one and five hundredths _____

$$6 \times 100 + 9 \times 10 + 1 \times 1 + 8 \times \frac{1}{1,000}$$

<
=
>

- 28.** Tom has a water tank that holds 5 gallons of water.

Part A

Tom uses water from a full tank to fill 6 bottles that each hold 16 ounces and a pitcher that holds $\frac{1}{2}$ gallon.

How many ounces of water are left in the water tank?

Enter your answer in the box.

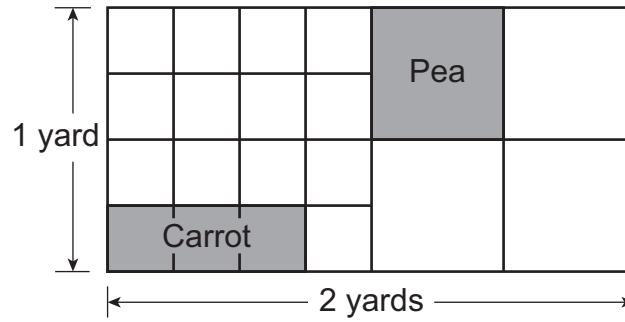
Part B

Tom drinks 4 pints of water a day.

How many full tanks of water will he drink in 30 days?

Enter your answer in the box.

29. Joshua planted carrots and peas in his garden.



Use the model to write and solve an equation that shows how much larger, in square yards, the pea section of the garden is than the carrot section of the garden.

Enter your equation and your solution in the box provided.



NO TEST MATERIALS

Session 3

Directions:

Today, you will take Session 3 of the Grade 5 Mathematics Practice Test. You will not be able to use a calculator in this session.

Read each question. Then, follow the directions to answer each question. Mark your answers by circling the correct choice. If you need to change an answer, be sure to erase your first answer completely.

Some of the questions will ask you to write a response. Write your response in the space provided in your test booklet.

If you do not know the answer to a question, you may go on to the next question. If you finish early, you may review your answers and any questions you did not answer in this session **ONLY**.

GO ON ►

30. What is the value of $4.05 \div 1.5$?

Enter your answer in the box.

GO ON ►

31. Emma has a board that is 5 feet long. She cuts the board into 6 equal pieces.

Which equation shows how to find the length, in feet, of each piece of the board?

A. $5 \times 6 = 30$

B. $6 - 5 = 1$

C. $6 \div 5 = 1\frac{1}{5}$

D. $5 \div 6 = \frac{5}{6}$

32. Solve.

$$\frac{5}{6} \times \frac{9}{10} =$$

A. $\frac{14}{16}$

B. $\frac{15}{30}$

C. $\frac{45}{60}$

D. $\frac{50}{54}$

GO ON ►

33. Jen makes a rectangular banner. It is $\frac{3}{4}$ yard long and $\frac{1}{4}$ yard wide.

What is the area, in square yards, of the banner?

- A. $\frac{3}{16}$
- B. $\frac{3}{8}$
- C. 1
- D. 3

34. Multiply.

$$\begin{array}{r} 2,639 \\ \times \quad 29 \\ \hline \end{array}$$

Enter your answer in the box.

GO ON ►

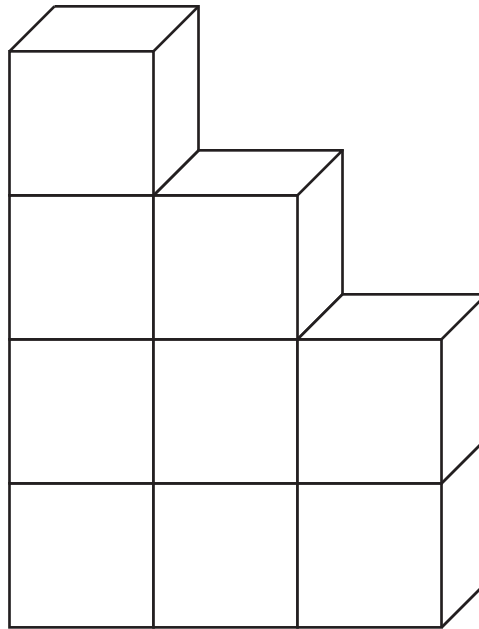
35. Which expression is equal to $\frac{7}{8}$?

A. $8 - 7$

B. 7×8

C. $\frac{8}{7}$

D. $7 \div 8$



36. Anika stacked cubes, each with an edge of 1 inch, to build a model. The figure above shows how Anika stacked the cubes. What is the volume, in cubic inches, of Anika's model?
- A. 3
 - B. 9
 - C. 16
 - D. 18

37. Which statement correctly compares two values?

- A. The value of the 6 in 26.495 is $\frac{1}{10}$ the value of the 6 in 17.64.
- B. The value of the 6 in 26.495 is 10 times the value of the 6 in 17.64.
- C. The value of the 6 in 26.495 is $\frac{1}{100}$ the value of the 6 in 17.64.
- D. The value of the 6 in 26.495 is 100 times the value of the 6 in 17.64.

38. What exponent will make this equation true?

$$10^? = 1,000$$

Enter your answer in the box.

- 39.** A cereal box has a height of 32 centimeters. It has a base with an area of 160 square centimeters.

What is the volume, in cubic centimeters, of the cereal box?

Enter your answer in the box.

40. Write the expression that matches each statement into the correct box. Each expression may be used more than once or not at all.

Expressions:

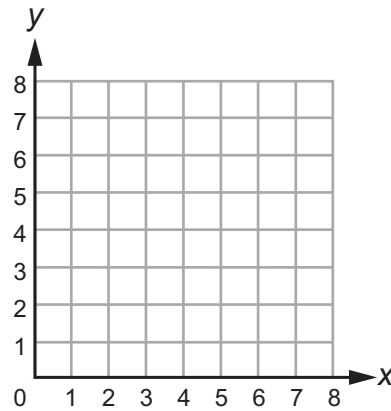
$$2 + 4 - 9$$

$$9 - 2 + 4$$

$$9 - (2 + 4)$$

the sum of 2 and 4 subtracted from 9	add 2 and 4, then subtract 9	subtract 2 from 9, then add 4

41. Graph points A , B , and C on the coordinate plane. Point A should be located at $(4, 6)$, point B should be located at $(6, 4)$, and point C should be located at $(3, 0)$. Be sure to graph all **three** points.



Use the information provided to answer Part A through Part C for question 42.

42. Shannon is building a rectangular garden that is 18 feet wide and 27 feet long.

Part A

Write an equation that represents the area of Shannon's garden. In your equation, let g represent the area of Shannon's garden. Then solve your equation.

Enter your equation and your solution in the box provided.

GO ON ►

Part B

Shannon is putting a fence around the garden, except where there is a gate that is 3 feet wide.

One foot of the fence costs \$43. The cost of the gate is \$128.

Write an expression that represents the total cost of the fence and the gate.

Explain how you determined your expression.

Enter your expression and your explanation in the box provided.

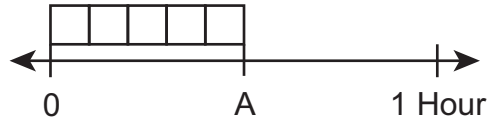
Part C

Use your expression from Part B to find the total cost, in dollars, of the fence and the gate.

Enter your answer in the box.

GO ON ►

43. Cora has $\frac{1}{2}$ hour to do 5 chores. She plans to spend the same fraction of an hour on each chore. She wants to use the number line to help her determine what fraction of an hour she can spend on each chore.



- What is the correct number label for point A?
- Explain how to use this number line to help Cora solve her problem.
- What fraction of an hour will she spend on each chore?

Enter your answers and your explanation in the box provided.



LEAP 2025