



## All About Math Level 5 Placement Test

If your student did not complete *All About Math* Level 4, use this checklist and the student activity pages following to verify placement in Level 5. Your student should get all items in a question correct in order to checkmark that question.

1. Your student can identify and create models to represent fractions. Have your student partition and shade the model or identify the fraction based on the fraction situation on the student activity page.

**Model 1:** (*partitioned into twelve equal parts with five parts shaded in*)

**Model 2:** ( *$\frac{7}{10}$  of the quilt is blue*)

2. Your student can compare fraction models. To test this, have your student partition and shade the model to compare the fractions using comparison symbols.

**Model 1:** ( $\frac{5}{6} > \frac{5}{8}$ )

**Model 2:** ( $\frac{3}{12} < \frac{3}{10}$ )

3. Your student can order sets of fractions with the same denominator or the same numerator from least to greatest or greatest to least. Have your student list the fractions in the correct order on the student activity page.

**Comparison 1:** ( $\frac{1}{5}, \frac{3}{5}, \frac{5}{5}, \frac{8}{5}$ )      **Comparison 2:** ( $\frac{3}{5}, \frac{3}{8}, \frac{3}{10}, \frac{3}{12}$ )

4. Your student can compare the sizes of fractions by comparing them to the benchmarks of  $\frac{1}{2}$  and 1. Have your student place a check mark to answer if the fraction is less than  $\frac{1}{2}$ , between  $\frac{1}{2}$  and one, or greater than one. Then, have your student write how far each fraction is from one whole.

**Answer:** ( $\frac{3}{10}$  is less than  $\frac{1}{2}$  and  $\frac{7}{10}$  away from one whole.  $\frac{7}{12}$  is between  $\frac{1}{2}$  and one and  $\frac{5}{12}$  from one whole.  $\frac{7}{4}$  is greater than one whole and  $\frac{3}{4}$  away from one whole.)

5. Your student can use visual representations to show that fractions are equivalent. To test this, have your student shade the model to find the equivalent fraction. Then, have your student write the fraction on the lines.

**Answer:** (*The model on the left represents  $\frac{3}{4}$ . The equivalent fraction is  $\frac{9}{12}$ . Nine of the 12 parts are shaded in.*)

6. Your student can generate equivalent fractions by using multiples of both the numerator and denominator. To test this, have your student write two fractions that are equivalent to  $\frac{2}{3}$ . Your student can use skip counting or multiplication.

**Answer:** ( $\frac{2}{3}$  is equivalent to  $\frac{4}{6}, \frac{6}{9}, \frac{8}{12}$ , and  $\frac{10}{15}$ )

7. Your student can order sets of fractions by making common denominators. Have your student create equivalent fractions to compare and order sets of fractions.

**Set 1:**  $(\frac{1}{3}, \frac{2}{3}, \frac{3}{4}, \frac{5}{6})$       **Set 2:**  $(\frac{5}{3}, \frac{7}{9}, \frac{2}{3}, \frac{5}{12})$

8. Your student can represent decimals in different ways, including diagram, decimal, and fraction form. To test this, have your student fill in the table to represent the decimal using a diagram, decimal form, and fraction form.

**One and three hundredths:** *The diagram will have one grid fully shaded in, and three squares shaded in. The decimal is 1.03.*

**Seven tenths:** *The fraction is  $\frac{7}{10}$  and the decimal 0.7.*

**Forty-five hundredths:** *The diagram has four columns and five small squares shaded in. The fraction is  $\frac{45}{100}$ .*

9. Your student can round decimals to the nearest tenth and whole number. Have your student complete the problems on the student activity page. Your student can use the number line to help her.

**Rounding 1:** *(0.6 rounds to 1)*      **Rounding 2:** *(0.13 rounds to 0.1)*

10. Your student can compare decimals on a number line. Have your student place the decimal numbers on the number lines. Then, use the number lines to compare the decimals and add a comparison symbol to make the statement true.



11. Your student can order decimals from least to greatest or greatest to least. Have your student list the decimals in the correct order on the student activity page.

**Set 1:** 2.20, 2.25, 2.28, 2.31      **Set 2:** 5.4, 5.29, 5.17, 4.99

12. Your student can multiply a multi-digit whole number by a one-digit whole number and multiply a two-digit whole number by a two-digit whole number. To test this, have your student find the product on the student activity page.

**Answer:**  $(2,459 \times 3 = 7,377, 46 \times 29 = 1,334)$

13. Your student can find whole-number quotients and remainders with multi-digit dividends. To test this, have your student find the quotient on the student activity page.

**Answer:**  $(8,424 \div 9 = 936, 1,941 \div 4 = 485 R 1)$

14. Your student can interpret the meaning of remainders in division story problems that represent real-world situations. Have your student find the quotient and interpret the remainder.

**Situation 1:** *(They need 21 groups because  $143 \div 7 = 20$  R3, and those 3 people cannot be left behind, so there needs to be one more group to involve all of the people.)*

**Situation 2:** *(Jacob will have 15 full pages.  $126 \div 8 = 15$  R 6. Since the question asks about how many full pages, the answer is 15.)*

15. Your student can multiply a whole number by a fraction. Have your student find the product. Your student can use a tape diagram if she would like.

**Answer:**  $7 \times \frac{1}{3} = \frac{7}{3}$        $8 \times \frac{7}{10} = \frac{56}{10}$

16. Your student can add and subtract fractions with the same denominator. To test this, have your student find the sum or difference on the student activity page.

**Answer:**  $4\frac{7}{10} - 2\frac{4}{10} = 2\frac{3}{10}$        $\frac{7}{12} + \frac{3}{12} = \frac{10}{12}$   
 $3\frac{1}{4} - 1\frac{3}{4} = 1\frac{2}{4}$        $\frac{3}{4} + 1\frac{1}{4} = 1\frac{4}{4}$  or 2

17. Your student can identify lines, segments, and rays. Have your student use the word bank to write the correct name of each figure on the blank.

**Answer:** *(segment, parallel lines, ray, line)*

18. Your student can analyze, describe, extend, and generate visual and numerical patterns. To test this, have your student answer questions about the patterns on the student activity page.

**Pattern 1:** *(The next three shapes in the pattern are a green square, purple rectangle, green square. The 11th shape will be a green square.)*

**Pattern 2:** *(The next two numbers in the pattern are 125 and 625. The rule is  $\times 5$ .)*

19. Your student can represent and solve multiplicative comparison problems, including those involving unknown factors. To test this, have your student write the equation to represent the story problem and then solve the story problem.

**Story Problem 1:** *(The equation is  $3 \times 4 = 12$ . She baked 12 loaves of bread on Tuesday.)*

**Story Problem 2:** *(The equation is  $24 \div 6 = 4$  or  $4 \times 6 = 24$ . Jamal baked 4 loaves of bread.)*

20. Your student can solve multi-step problems involving the four operations. To test this, have your student make a model or write an equation to represent each problem and then solve to find the answer.

**Story Problem 1:** ( $10 \times 125 = 1,250$ .  $208 \times 6 = 1,248$ .  $1,250 - 1,248 = 2$  tickets. Marley earned two more tickets than Zoe.)

**Story Problem 2:** ( $3,420 - 1,150 = 2,270$ .  $2,270 \div 5 = 454$ . Each bracelet costs 454 tickets.)

21. Your student can identify shapes and features of shapes. To test this, have your student complete the table on the student activity page.

**Answers:** (*acute triangle, acute angle, right triangle, obtuse angle, right angle*)

22. Your student can convert between different units of measurement. Have your student complete the table on the student activity page.

**32 cups:** 16 pints, 8 quarts, 2 gallons

**72 feet:** 864 inches, 24 yards

**2,000,000 milligrams:** 2,000 grams, 2 kilograms

**1,000,000 millimeters:** 100,000 centimeters, 1,000 meters, 1 kilometer

23. Your student can solve story problems that involve intervals of time. To test this, have your student complete the story problems on the student activity page.

**Answers:** (*5:55 PM, 2:30 PM, 2 hours and 45 minutes*)

## How did your student do?

- If your child could easily complete 21 or more of the 23 skills, begin Level 5.
- If just one or two areas were difficult, you can remediate in those areas as you start Level 5.
- If 20 or fewer boxes were checked, start with Level 4 to build a strong foundation for math..

If you have any questions about the program or would like to learn how to adapt certain aspects of the program to accommodate your child's needs, feel free to call us at 715-477-1976 or email us at [support@allaboutlearningpress.com](mailto:support@allaboutlearningpress.com). And if you need ideas on how to help your child build skills, just let us know—we are always happy to help!

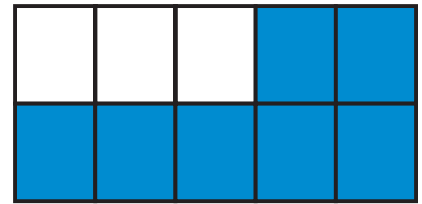
- Partition the model to represent a fraction or identify the fraction of the model based on the fraction situation.

$\frac{5}{12}$  of the quilt is red

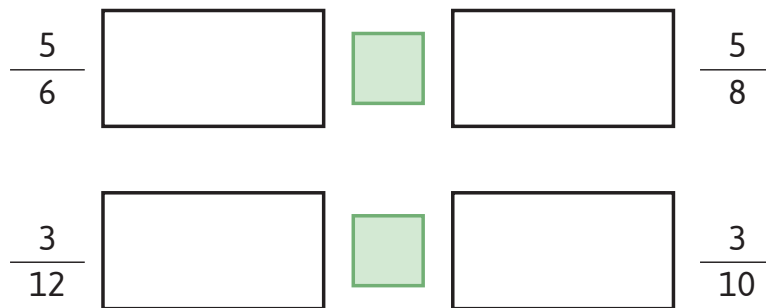


What fraction of the quilt is blue?

\_\_\_\_\_



- Use the model to represent the fraction. Then, use the models to compare each set of fractions and use a comparison symbol to make the statement true.



- List the following fractions in order from least to greatest.

$$\frac{3}{5} \quad \frac{8}{5} \quad \frac{5}{5} \quad \frac{1}{5}$$

\_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_

List the following fractions in order from greatest to least.

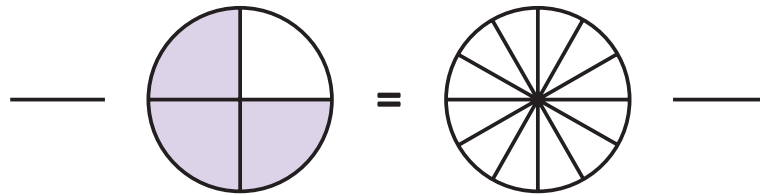
$$\frac{3}{12} \quad \frac{3}{8} \quad \frac{3}{5} \quad \frac{3}{10}$$

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_,

4. Place a checkmark to answer if the fraction is less than  $\frac{1}{2}$ , between  $\frac{1}{2}$  and one, or greater than one. Use what you know about fractional parts to write how far each fraction is from one.

Fraction	Less than $\frac{1}{2}$	Between $\frac{1}{2}$ and 1	Greater than 1	Distance away from 1
$\frac{3}{10}$				
$\frac{7}{12}$				
$\frac{7}{4}$				

5. Shade the model to find the equivalent fraction. Then write the fractions that represent each model.



6. Write two fractions that are equivalent to  $\frac{2}{3}$ . You can use skip counting or multiplication.

$$\frac{2}{3} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

7. List the following fractions in order from least to greatest.

$$\frac{5}{6} \quad \frac{1}{3} \quad \frac{3}{4} \quad \frac{2}{3}$$

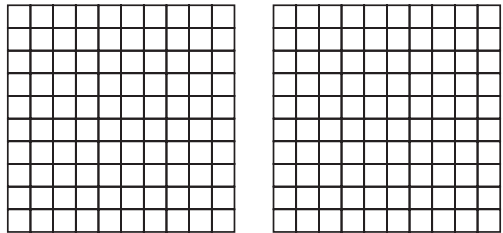
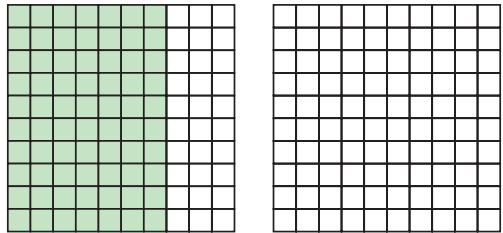
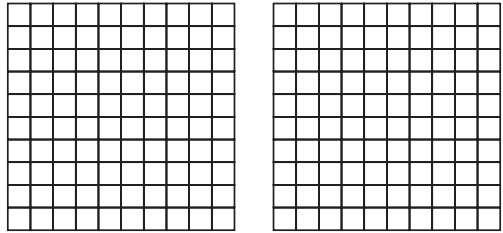
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List the following fractions in order from greatest to least.

$$\frac{2}{3} \quad \frac{5}{12} \quad \frac{7}{9} \quad \frac{5}{3}$$

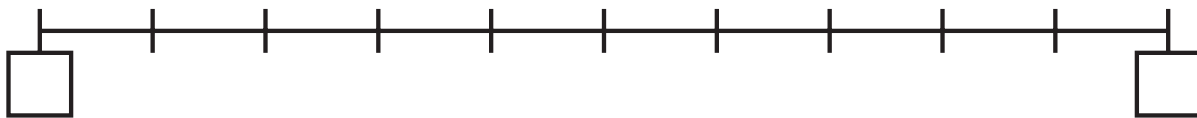
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8. Fill in the table below to represent decimals in different ways.

Word Form	Model	Fraction	Decimal
one and three hundredths		$1\frac{3}{100}$	
seven tenths			
forty-five hundredths			0.45

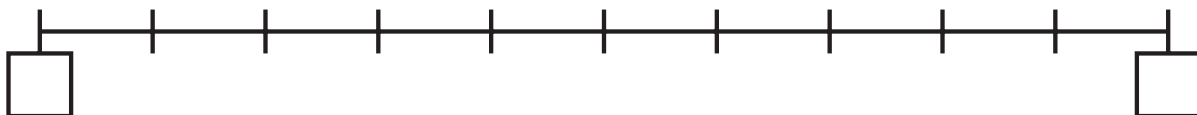
9. Round 0.6 to the nearest whole number.

Answer: \_\_\_\_\_

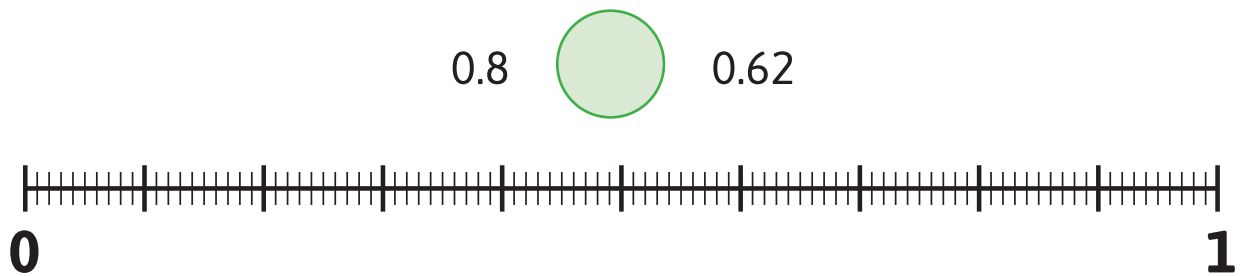
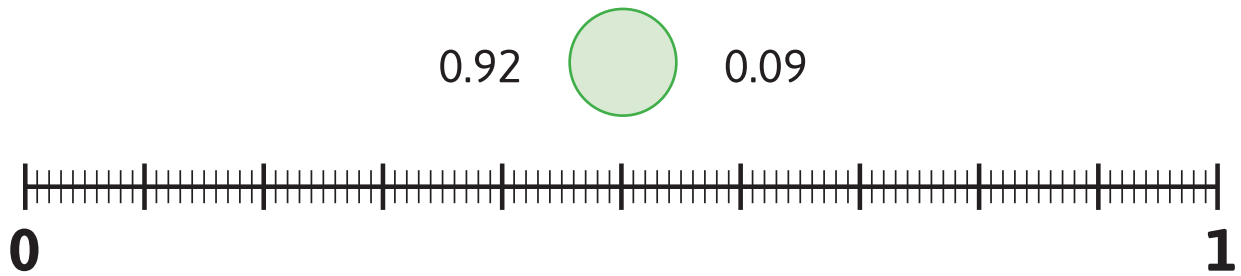


Round 0.13 to the nearest tenth.

Answer: \_\_\_\_\_



10. Place the decimal numbers on the number lines. Then, compare the decimals and use a comparison symbol to make each statement true.



11. List the following decimals in order from least to greatest.

2.25   2.20   2.31   2.28

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_,

List the following decimals in order from greatest to least.

5.17   5.29   4.99   5.4

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_,

12. Find the product using partial products or another strategy.

$$2,459 \times 3 = \underline{\hspace{2cm}}$$

$$46 \times 29 = \underline{\hspace{2cm}}$$

13. Find the quotient using partial quotients or another strategy.

$$8,424 \div 9 = \underline{\hspace{2cm}}$$

$$1,941 \div 4 = \underline{\hspace{2cm}}$$

14. Use division to solve the story problem and interpret the remainder.

A group of 143 people are on a tour of the White House. They need to be placed in groups. Each group can have 7 people. How many groups will be needed so all of the people can tour the White House?

Answer:                      groups

Jacob has collected 126 baseball cards. He wants to store them in a binder. Each page of the binder can hold 8 baseball cards. How many full pages will Jacob have?

Answer:                      groups

15. Multiply the whole number by the fraction. You can draw a model on the dry-erase board to help you, if you would like. The answer may be written as an improper fraction.

$$7 \times \frac{1}{3} = \underline{\hspace{2cm}}$$

$$8 \times \frac{7}{10} = \underline{\hspace{2cm}}$$

16. Find the sum or difference.

$$4\frac{7}{10} - 2\frac{4}{10} = \underline{\hspace{2cm}}$$

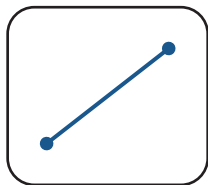
$$\frac{7}{12} + \frac{3}{12} = \underline{\hspace{2cm}}$$

$$3\frac{1}{4} - 1\frac{3}{4} = \underline{\hspace{2cm}}$$

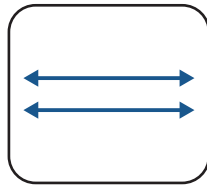
$$\frac{3}{4} + 1\frac{1}{4} = \underline{\hspace{2cm}}$$

17. Write the correct name of each figure on the blank. A word bank has been provided.

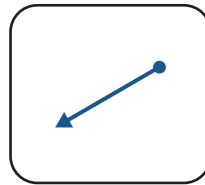
line    parallel lines    point    ray    segment



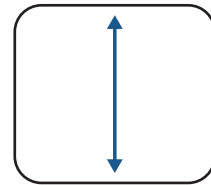
\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

18. Continue the shape pattern, and then answer the question about each pattern.



If the pattern continues, what would be the 11th shape? \_\_\_\_\_

Continue the number pattern, and then write the rule.

1, 5, 25, \_\_\_\_\_, \_\_\_\_\_      Rule: \_\_\_\_\_

19. Write the equation that represents the multiplicative comparison story problem. Then solve the story problem.

Lina baked 3 loaves of bread on Monday. On Tuesday, she baked 4 times as many loaves as she did on Monday. How many loaves did she bake on Tuesday?

Equation: \_\_\_\_\_      Answer: \_\_\_\_\_ loaves

Jamal baked some loaves of bread on Saturday. His sister baked 24 loaves, which is 6 times as many as Jamal baked. How many loaves did Jamal bake?

Equation: \_\_\_\_\_      Answer: \_\_\_\_\_ loaves

20. Make a model or write an equation to represent each problem and then solve to find the answer.

In the first hour at the carnival, Marley played 10 games and earned 125 tickets each time. Zoe played 6 games and earned 208 tickets each time. How many more tickets did Marley earn than Zoe?

Answer: \_\_\_\_\_

You collected 3,420 tickets at the carnival! You spent 1,150 tickets on a remote-control car. Then you bought 5 glow-in-the-dark bracelets, all the same price. You used all your remaining tickets on the bracelets. How many tickets did each bracelet cost?

Answer: \_\_\_\_\_

21. Identify the type of angle or triangle. Then complete the chart by filling in the name of the feature or shape. A word bank has been provided. Not all the words will be used.

acute angle


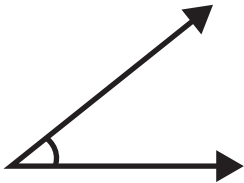

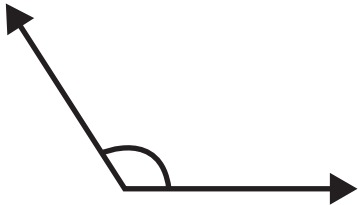
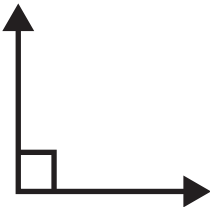
acute triangle

obtuse angle

obtuse triangle

right angle

right triangle

Model	Type
	
	
	
	
	

22. Convert the units of measurement. Then complete the chart by filling in the correct measurements.

Unit of Measurements	Convert to:		
32 cups	16 pints	_____ quarts	_____ gallons
72 feet	_____ inches	_____ yards	
2,000,000 milligrams	_____ grams	_____ kilograms	
1,000,000 millimeters	100,000 centimeters	_____ meters	_____ kilometers

23. Solve the following elapsed time story problems.

Eliana's soccer practice started at 4:20 PM. She practiced for 1 hour and 35 minutes. What time did soccer practice end?

Answer: \_\_\_\_\_

Jayden left the skating rink at 5:05 PM. He was there for 2 hours and 35 minutes. What time did Jayden arrive at the skating rink?

Answer: \_\_\_\_\_

Lucas went to the aquarium. He arrived at 11:15 AM and left at 2:00 PM. How much time did Lucas spend at the aquarium?

Answer: \_\_\_\_\_