

## Entry-Level Assessment for Pre-Algebra: Placement Recommendation

<b>Concepts and Skills</b>	<b>Assessment Items</b>	<b>Items Correct</b>
Whole Numbers	1 – 3	___ / 3
Decimals	5 – 9	___ / 5
Number Theory and Fraction Concepts	11 – 12	___ / 2
Operations with Fractions	13 – 16	___ / 4
Geometry	17 – 19	___ / 3
Ratio, Proportion, and Percent	20 – 24	___ / 5
Measurement	25 – 29	___ / 5
Pre-Algebra Basics	10, 30 – 37	___ / 9
Statistics and Probability	4, 38 – 42	___ / 6
		___ TOTAL

### Suggested Placement

**ADVANCED LEARNERS:** If total score is 37 or more, consider placement into an accelerated or advanced course. These students may be able to skip some Pre-Algebra topics and progress at a faster pace.

**BENCHMARK GROUP:** If total score is at least 27 but less than 37, recommend placement into Pre-Algebra.

**STRATEGIC GROUP:** If total score is at least 21 but less than 27, recommend placement into Pre-Algebra with intervention. (See page 15.)

**INTENSIVE GROUP:** If total score is less than 21, consider further testing and/or recommending a lower-level course.

**Recommended Next Course** \_\_\_\_\_

**Teacher's Comments** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Entry-Level Assessment for Pre-Algebra

Write directly on the test and show your work. Write your final answers in the answer blanks provided at the right. Fraction answers should be in simplest form. No calculators are allowed.

**Compute.**

1.  $50 \overline{)36050}$

2.  $67 \overline{)879}$

1. \_\_\_\_\_

2. \_\_\_\_\_

3. If 2 batches of bread need 7 cups of flour, how many cups of flour will be needed for 4 batches?

3. \_\_\_\_\_

4. Three sixth-grade classes have 28 students, 26 students, and 21 students. Find the average number of students per class.

4. \_\_\_\_\_

**Compute.**

5. 
$$\begin{array}{r} 4.3 \\ \times 2.8 \\ \hline \end{array}$$

6.  $1.63 \overline{)3.912}$

5. \_\_\_\_\_

6. \_\_\_\_\_

7. What is the price per pound, to the nearest cent, if 5 pounds of flour cost \$1.62?

7. \_\_\_\_\_

8. Tom's dinner cost \$7.75 plus \$0.66 tax. How much change should he receive from a \$20 bill?

8. \_\_\_\_\_

9. Jean's times for two laps of a race were 12.6 seconds and 14.7 seconds. What was her total time for the two laps?

9. \_\_\_\_\_

10. In a series of four 30-minute games, Charlene scored a total of 283 points. To the nearest tenth, what was the number of points per minute she scored over the four games?

10. \_\_\_\_\_

11. What is the greatest common factor of 36 and 40?

11. \_\_\_\_\_

12. Find the smallest number divisible by both 10 and 12. 12. \_\_\_\_\_

**Simplify 13-16.**

13.  $\frac{7}{8} \times (-\frac{4}{5})$  14.  $8\frac{1}{4} - 3\frac{3}{8}$  13. \_\_\_\_\_

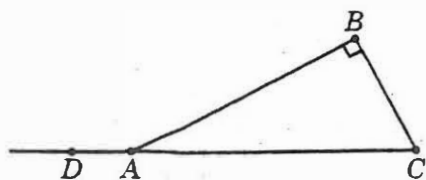
14. \_\_\_\_\_

15.  $\frac{5}{6} \div \frac{2}{3}$  16.  $\frac{7}{12} - \frac{1}{4} + 2\frac{1}{2}$  15. \_\_\_\_\_

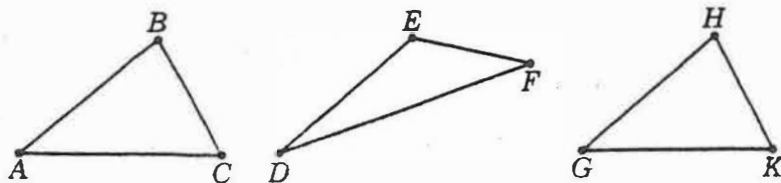
16. \_\_\_\_\_

17. If  $\angle B$  is a right angle, and  $m\angle C$  is  $35^\circ$ , find  $m\angle CAB$  and  $m\angle DAB$ . 17.  $m\angle CAB$  \_\_\_\_\_

$m\angle DAB$  \_\_\_\_\_



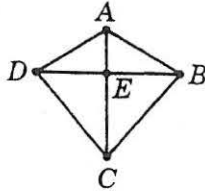
18. Which two triangles appear to be congruent? 18. \_\_\_\_\_





Name \_\_\_\_\_ Date \_\_\_\_\_

19. In the kite below, if  $\overline{AC}$  is perpendicular to  $\overline{BD}$ , then the  $m\angle AED$  is ? degrees. If  $E$  is the midpoint of  $\overline{BD}$ , then the lengths of  $\overline{BE}$  and  $\overline{ED}$  are ?. 19. \_\_\_\_\_  
 \_\_\_\_\_



20. Out of 100 students in the sixth grade, 73 have pets. What portion of the students in sixth grade have pets? Give your answer as a fraction, a decimal, and a percent. 20. \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

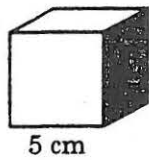
21. Terry is buying a \$25 shirt. How much will he save with his 15% employee discount? 21. \_\_\_\_\_

22. In Mrs. Anderson's class of 30 students, 40% are girls. How many girls are in the class? 22. \_\_\_\_\_

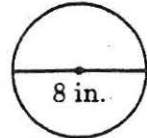
23. There are 25 penguins at the neighborhood zoo, and 12 of them are male. What is the ratio of male penguins to females? 23. \_\_\_\_\_

24. A package contains 30 blocks, and 20 of them are red. How many red blocks would you expect in five packages the same size as the first? 24. \_\_\_\_\_

25. How many square centimeters of paint will be needed to cover the cube at the right? 25. \_\_\_\_\_



26. Find the circumference and the area of the circle at the right. Use 3.14 for  $\pi$ . 26. \_\_\_\_\_



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Algebra

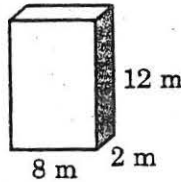


Name \_\_\_\_\_ Date \_\_\_\_\_

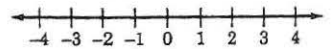
27. There are 2.54 centimeters in one inch. How many centimeters are in a yard? 27. \_\_\_\_\_

28. Sara's rectangular garden is 20 feet by 35 feet. What is the area of her garden? 28. \_\_\_\_\_

29. Find the volume of the box at the right. 29. \_\_\_\_\_

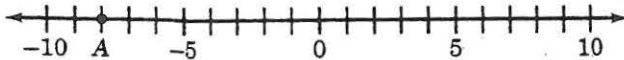


30. Arrange these numbers in order from least to greatest, and then plot them on the number line. Label each point with its coordinate. 30. \_\_\_\_\_



$\frac{17}{100}$ ,  $\frac{10}{3}$ ,  $-\frac{1}{2}$ , 1.8, -150%, -3

31. If each space on the number line represents 1 unit, what integer is represented by point A? 31. \_\_\_\_\_



32. Evaluate the expression  $0.08 \times n$  for  $n = 9$ . 32. \_\_\_\_\_

33. Compute. 33. \_\_\_\_\_

$(-6)(-4) \div -12$

34. Solve for  $x$ . 34. \_\_\_\_\_

$\frac{x}{4} = 24$

35. Solve for  $x$ . 35. \_\_\_\_\_

$x - 12 = 18$

36. Solve for  $x$ . 36. \_\_\_\_\_

$5x + 13 = 27$

37. Write an equation for "18 less than a number  $n$  is 9." Then solve for  $n$ . 37. \_\_\_\_\_



Name \_\_\_\_\_ Date \_\_\_\_\_

38. If the probability that event A will occur is 0.91, what is the probability that event A will NOT occur? 38. \_\_\_\_\_
39. A child tosses a cube and then tosses a coin to select a prize. The faces of the cube are numbered from 1 to 6. How many different prizes, or outcomes, are possible? 39. \_\_\_\_\_
40. A bowl contains colored gumballs. Five are red, seven are blue, three are yellow, and three are green. What is the probability that the first gumball selected will be blue? 40. \_\_\_\_\_
41. A toss of a fair coin comes up heads. A second toss of the coin comes up heads. Why are these two events independent? 41. \_\_\_\_\_
42. The table shows the top four results of a survey in which 2,000 students were asked to name their favorite class in school. According to the table, how many students named Gym as their favorite class? 42. \_\_\_\_\_

Class	Percent of students selecting class
Mathematics	35%
English	28%
Gym	24%
History	15%