Placement Test Instructions

This placement test can help you determine whether your child is ready for the Algebra 1 Teaching Textbook. The test is not perfect, so in making any final placement decision also use common sense.

The student should work independently without the use of a calculator. It is not necessary to time the test, but most students will finish in less than $1\frac{1}{2}$ hours.

Scoring

The test is divided into two sections. Section 1 includes problems 1 - 15. This is the simpler part of the test, covering material from the first half of our Pre-Algebra product. Section 2 includes problems 16 - 30. It is the more difficult part of the test, covering material from the second half of our Pre-Algebra product.

The student is probably ready for Algebra 1 if he/she makes the following scores on the two sections.

10 or more correct on Section 1 (problems 1 - 15) and 8 or more correct on Section 2 (problems 16 - 30)

If the student's score falls below this level, the Pre-Algebra Teaching Textbook is probably a better starting point.

Algebra 1 Placement Test

Section 1

1. Convert
$$\frac{7}{8}$$
 to a decimal.

- 2. The water tank had a maximum capacity of 84 gallons. If the tank was $\frac{2}{7}$ full, how many gallons of water did it have?
- 3. George cut $\frac{2}{3}$ of the pie and put that giant piece on his plate. Then he ate $\frac{1}{4}$ of that piece. What fraction of the original pie did George eat?
- 4. 15 has how many $\frac{3}{4}$ s in it?

Answer each question below.

- 5. Write 5.6% as a decimal.
- **6.** What is 45% of 175?
- 7. What percent of 52 is 12? Round your answer to the nearest tenth.
- 8. Convert 32% to a fraction. Make sure your answer is fully reduced.

Do each unit conversion below.

- 9. How many inches are in 35 feet?
- **10.** Convert 15,840 feet into miles. (1 mile = 1,760 yards; 1 yard = 3 feet)
- **11.** How many millimeters are in 4.511 meters?
- **12.** Convert 140 square feet into square inches.

Calculate the value of each expression below.

13. 3(-9+17) **14.** 5(-8)-21 **15.** $(2\cdot3)^3$

Section 2

Solve each equation below.

- **16.** x 14 = 39 **17.** $x + \frac{1}{3} = \frac{3}{5}$ **18.** 2x 15 = 43
- **19.** $\frac{y}{3} + 4 = 15$ **20.** 5x + 6x = 99 **21.** 7(x+4) = 105

Reduce each fraction below.

22.
$$\frac{5}{25x}$$
 23. $\frac{3x^2}{12x^6}$

Simplify each expression below. Make sure any fractions are fully reduced.

24. 9x-2x **25.** $\frac{2x}{25} \cdot \frac{5x}{16x}$ **26.** $\frac{3y}{13} + \frac{7y}{26}$

27. $\frac{3}{2z} - \frac{4}{5z}$

Translate each problem below into an equation and solve.

- **28.** How long did it take Ted to drive (in his new sports car) 272 miles if his average speed was 68 mph?
- **29.** Mr. Drysdale earned \$906.25 in interest in one year on money that he had deposited in his local bank. If the bank paid an interest rate of 6.25%, how much money did Mr. Drysdale deposit?
- **30.** There's some number that if you subtract 15 from it first, and then multiply that total by 7, the result is 28. Find the number.

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- **1.** 0.875
- **2.** 24 gallons
- 1 3.
- 6
- 4. 20
- **5.** 0.056
- **6.** 78.75
- 7. 23.1%
- $\frac{8}{25}$ 8.
- **9.** 420 inches
- **10.** 3 miles
- **11.** 4,511 millimeters
- **12.** 20,160 square
- inches
- **13.** 24
- **14.** -61
- **15.** 216 53
- 16. $\frac{4}{15}$
- 17.
- 18. 29
- 19. 33
- 20. 9
- 21. 11
- 22.
- $\frac{1}{5x}$ 1
- 23. $\overline{4x^4}$
- 7*x* 24.
- х 25.
- 40
- $\frac{y}{2}$ 26.
- $\frac{7}{10z}$ 27.
- 28. 4 hours
- 29. \$14,500
- 19 30.