



Algebra 1 Placement Test

This assessment will allow AHS math teachers to check to see if you have mastered the necessary Pre-Algebra skills to move on to Algebra 1. No stress. This test will merely serve as a means for us, teachers, to meet you at your specific math level. We want to determine which topics you need to review or relearn and which topics you have already mastered. (No calculator)

(Part 1) FREE RESPONSE

1) $(-8) + (-25) =$ 2) $(-7) \times (-15) =$ 3) $(11) - (-6) =$ 4) $(-45) \div (9) =$

5) James has \$10. He wants to buy a pack of baseball cards for 25 cents. How much money will he have left?

6) Round to the indicated place

- a. 19,384 to the nearest hundred _____
- b. 264,980 to the nearest ten thousand _____
- c. 783.0629 to the nearest thousandth _____
- d. 9.548 to the nearest tenth _____
- e. 0.395 to the nearest hundredth _____

7) Place the appropriate symbol $<$, $>$, or $=$ between the two numbers

- a. 18 _____ 81
- b. 0 _____ -50
- c. -3 _____ -5
- d. 4.058 _____ 4.06
- e. -0.07 _____ -0.007
- f. $|-6|$ _____ $|6|$
- g. $|3|$ _____ $|-7|$

8) Simplify.

A. $\frac{3}{5} - \frac{1}{5}$

B. $\frac{1}{12} + \frac{5}{8}$

C. $\frac{6}{5} \times \frac{5}{9}$

D. $\frac{9}{2} \div \frac{3}{2}$

9) Evaluate each of the following:

A. $10^3 =$

B. $(3)^4$

C. $(-2)^4$

10) Simplify each of the following:

A. $\sqrt{100}$

B. $\sqrt{36}$

C. $\sqrt{y^2}$

11) *Evaluate the expression WITHOUT using a calculator:* $56 - 12 \div 3 \bullet 2$

12) Allen has a debt of \$500. He owes equal amounts to ten different people. Express his debt to one person as a negative number.

13) If Silas added 5 years to his age, he would be 39. How old is Silas now? Write as an equation and solve.

- 14) Three times a number, plus eight, equals two times the number, plus ten. Write an equation and find the number.
- 15) One out of eight students has red hair. If there are twenty-four students, how many have red hair?
- 16) A room is 15 feet long, 13 feet wide, and 10 feet high. The walls are all to be painted the same color. How many square feet are to be painted? Explain your process.
- 17) Translate the following into mathematical expressions. Some expressions may be written the same as others, but worded slightly different in the problem.
- | | |
|---|---|
| a. The square of eight | b. Five decreased by a number |
| c. Seven cubed | d. Five subtracted from a number |
| e. A number increased by six | f. Five less than a number |
| g. Six greater than a number | h. Five is less than a number |
| i. A number divided by nine | j. Triple a number minus one |
| k. Nine more than double a number | l. Twice a number decreased by 3 |
| m. Seven less than four times a number | n. The product of six and a number |

o. The sum of two times a number and ten

p. The difference of five and a number **q.** The quotient of a number and nine

r. Two times the sum of a number and 10

Solve the equations.

18) $\frac{x}{5} = 7$

19) $5 - x = 7$

20) $2x - 3 = 17$

Simplify and solve for the unknown. Use order of operations as needed. Check your work.

21. a) $\frac{4x+8}{2} = 10$

b) Check by plugging in your answer.

22) a) $41 - x = 2(x+1) + 6$

b) Check by plugging in your answer.

23) a) $8m - 4m - 6 - 3 + 5m = 16 - 1$

b) Check by plugging in your answer.

Solve for the unknown.

24) $\frac{1}{8} = \frac{7}{y}$

25) $\frac{11}{12} = \frac{a}{48}$

26) Change 32% to a fraction.

27) Change 8.75% to a decimal.

28) Reducing the following Fractions:

A. $\frac{27}{18}$

B. $\frac{9}{15}$

29) What is the mean, median, and mode of the data set $\{3, 2, 5, 6, 1, 6\}$?

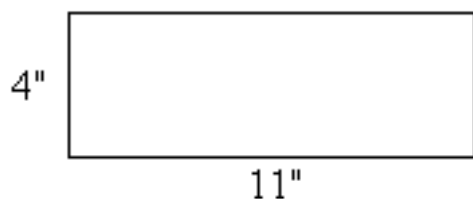
Mean:

Median:

Mode:

(Part 2) MULTIPLE CHOICE:

1. Find the perimeter of the rectangle show below.



Your answer:

- ☐ 30 inches
- ☐ 30 square inches
- ☐ 15 inches
- ☐ 44 inches
- ☐ 44 square inches

2. Write $4\frac{3}{4}$ as an improper fraction.

[A] $\frac{43}{4}$

[B] $\frac{19}{4}$

[C] $\frac{4}{19}$

[D] $\frac{4}{43}$

3. Write $\frac{38}{7}$ as a mixed number.

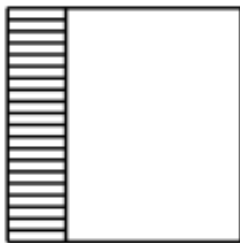
[A] $1\frac{5}{7}$

[B] $1\frac{6}{7}$

[C] $5\frac{7}{3}$

[D] $5\frac{3}{7}$

4. Write a decimal to estimate the amount of area shaded.



[A] 2.5

[B] 0.75

[C] 0.25

[D] 0.5