

Name: \_\_\_\_\_

## COLLEGE ALGEBRA

Spring 2014

Section: \_\_\_\_\_

ID: \_\_\_\_\_

## Prerequisite Assessment of Skills for Success (PASS)

Date if taken the TSI: \_\_\_\_\_

Date of last math course: \_\_\_\_\_

Last math course grade: \_\_\_\_\_

Bubble in each correct answer as  ; **25 MINUTES** ; Do not spend too much time on any one problem  
**NO CALCULATOR**

1. The set of all positive integer factors of 24 (excluding itself and 1) is:

- {2,3,4,6,12}     {2,4,6,8,9}     {2,3,4,8,12}     {2,3,4,6,8,12}     {2,4,6,8,12}

2. Evaluate  $\frac{1}{6} + \frac{1}{3} - \frac{2}{5}$ .

- $\frac{1}{5}$       $-\frac{2}{15}$       $\frac{3}{10}$       $-\frac{1}{30}$       $\frac{1}{10}$

3. Write 3.45% as a decimal .

- 0.0345     3.45     0.345     345     34.5

4. Evaluate  $9 + 12 \div 3 - 6$  .

- 7     1     5     -3     7

5. Evaluate  $\frac{4}{9} \div \frac{16}{45}$ .

- $\frac{2}{3}$       $\frac{64}{405}$       $\frac{4}{3}$       $\frac{5}{4}$       $\frac{405}{64}$

6. An airplane initially at 12,500 feet descends slowly toward an airport runway, decreasing its elevation at a rate of 250 feet per minute. After  $m$  minutes, the airplane's elevation is:

- $250 - 12500m$       $-250m + 12500$       $12500m - 250$       $250m + 12500$       $-250m$

7. Solve for x:  $1.25x + 12.5 = 2.5 - 3.75x$ .

- 2.5     -3     4     6     -2

8. Simplify:  $-(6x - 8x^2 + 7) - (3x^2 - 9 + 5x)$

- $-16 + x - 11x^2$       $18x^3 - 72x^2 + 35x$       $2 - 11x + 5x^2$       $5 + x - 2x^2$       $5x^2 - x + 2$

9. Choose the point that is an x-intercept:

- (-0.1, 1.0)     (-0.1, -1.0)     (1.0, -0.1)     (-1.0, 0.0)     (0.0, -1.0)

10. The expression  $(4 - 3x)^2$  is equivalent to:

- $9x^2 - 16$       $6x^2 - 7x + 8$       $9x^2 - 24x + 16$       $8 - 6x$       $-9x^2 + 16$

11. Consider the function  $f(x) = 10 - 6x - x^2$ ; evaluate  $f(-2)$ :

- 2                       18                       26                       -6                       2

12. Solve for "w" in the equation  $\frac{u}{w} = \frac{v}{t}$ .

- $\frac{ut}{v}$                         $\frac{t}{uv}$                         $\frac{v}{ut}$                         $\frac{uv}{t}$                         $\frac{vt}{u}$

13. Which is a factor of  $6x^2 - 7x - 3$ ?

- $2x-1$                         $x-3$                         $6x-1$                         $3x-1$                         $2x-3$

14. Simplify  $\frac{(2x^3)^2(3x^2)}{6x^5}$ .

- $2x^2$                         $3x$                         $2x^3$                        1                        $x^2$

15. Simplify  $\frac{1}{1+x} - \frac{1}{1-x^2}$ .

- $\frac{1}{x-1}$                         $\frac{x}{x^2-1}$                         $\frac{1}{x^3+x^2-x-1}$                         $\frac{x-2}{x^2-1}$                         $\frac{1+x}{1-x}$

16. If the solution set to the equation  $2x^2 - 3x - 2 = 0$  is  $\{x_1, x_2\}$ , then the sum  $x_1 + x_2$  is:

- $1.\bar{3}$                        -1.0                       0.0                       1.5                       -1.5

17. The domain of the function  $f(x) = \frac{x-1}{2x-1}$  in interval notation is:

- $(-\infty, 1) \cup (1, \infty)$                         $(0.5, 1)$                         $(-\infty, .5) \cup (.5, \infty)$                         $(-1, -0.5)$                         $(0.5, \infty)$

18. The solution set for the inequality  $x < 12 + 2x$  in interval notation is:

- $(-12, \infty)$                         $(4, \infty)$                         $(-6, \infty)$                         $(-4, \infty)$                         $(-\infty, 12)$

19. For the line  $3x - 2y = 4$ , the slope is:

- $-\frac{4}{3}$                        -2                        $\frac{2}{3}$                        3                        $\frac{3}{2}$

20. Simplify  $\frac{2-\sqrt{12}}{2}$ .

- $-\sqrt{12}$                         $1-\sqrt{6}$                         $-\sqrt{6}$                         $-\sqrt{3}+1$                         $2\sqrt{3}$