AC CCGPS Alg/Geo Exam Review
Fall 2015

Topics from Unit 1:

1. Sam wants a test average of 92%. He took four tests and earned a 90, 87, 98, and 98. What does he need to earn on the fifth test to have a test average of 92%?

2. Convert 65 ft/sec to mph

3. $A = \frac{1}{2}bh$, solve for h

4. The width of a garden is 6 feet less than its length. If the perimeter of the garden is 60 feet, what are the dimensions of the garden?

5. Given the functions: $f(x) = x^2 - 4x - 8$, $g(x) = 2x^2 + x - 3$, and $h(x) = 4x^2$

   Find f(2) _____   Find g(-3) _____

   _____

   Find f(x) + g(x). _____   Find f(x) – g(x). _____

   Find $h(x) \bullet f(x)$ _____   14. Find 2f(x) + 3g(x). _____

   _____

Topics from Unit 2:

6. How many solutions does the given system have?
$$\begin{cases} y = 2x + 1 \\ -4x + 2y = 2 \end{cases}$$
   A. none   B. exactly two
   C. exactly one   D. infinitely many

7. Solve the following system of equations: $\begin{cases} 2x+5y=19 \\ -3x+4y=29 \end{cases}$

8. A test has twenty-five questions worth 70 points. True/False questions are worth 2 points each and multiple choice questions are worth 4 points each. How many of each are there? Show all work. You must show equations.

9. Solve the following system of equations: $\begin{cases} 7x - y = 52 \\ 2y = x - 26 \end{cases}$

Topics from Unit 3A:

Solve by Quadratic Formula	Solve by Factoring	Solve by Completing the Square
10) $x^2 - 3 = 2x$		
11) $2x^2 = -12x - 10$		

12) $x^2 - 2x - 48 = 0$		
13) $2x^2 + 4x = x^2 + 2x + 63$		
14) $x^2 + 8x = -16$		
15) Solve by using square roots:	$2(x-1)^2 - 1 = 7$	$-4x^2 = -16$

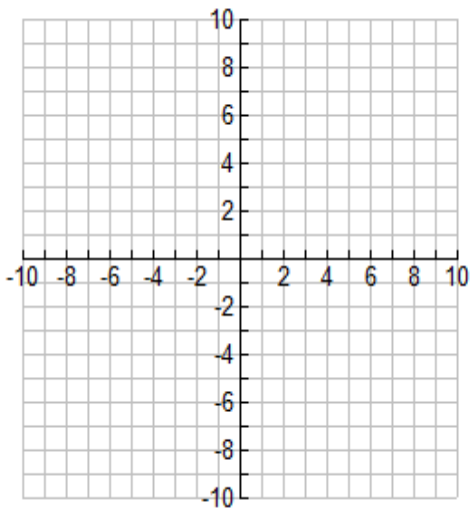**Topics from Unit 3B:** Graphing and Converting Quadratics

16. $f(x) = (x-3)^2 - 2$

x/y table:
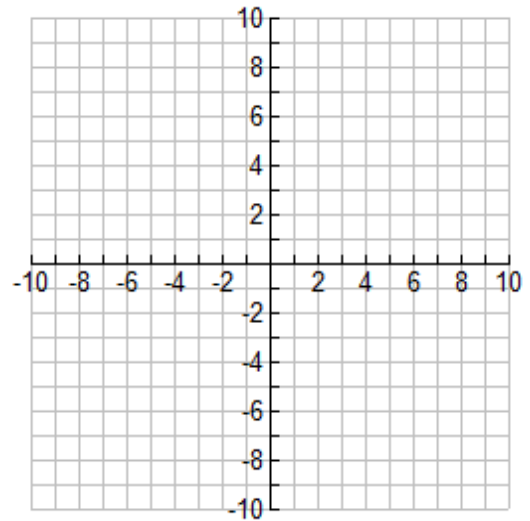
a) Vertex: _____ AOS:_____

c) y-intercept: _____

d)

17. $f(x) = -(x+4)^2 + 1$

x/y table:

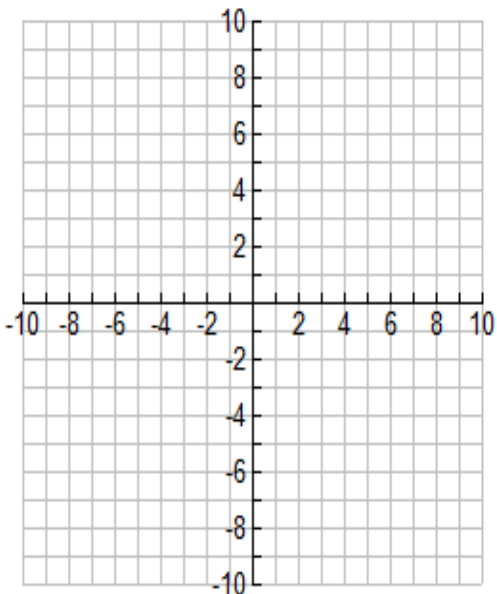a) Vertex: _____ AOS:_____

c) y-intercept: _____

d)

18) $f(x) = 2x^2 - 16x + 29$

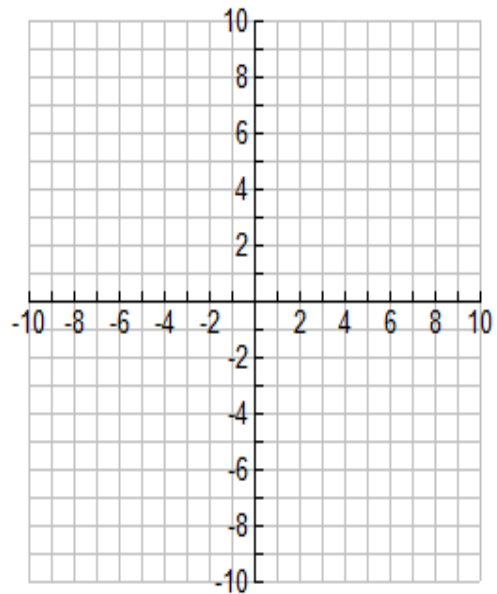x/y table:

a) Vertex: _____ AOS:_____

c) y-intercept: _____

19) $f(x) = x^2 - 10x + 21$

x/y table:

a) Vertex: _____ AOS:_____

c) y-intercept: _____

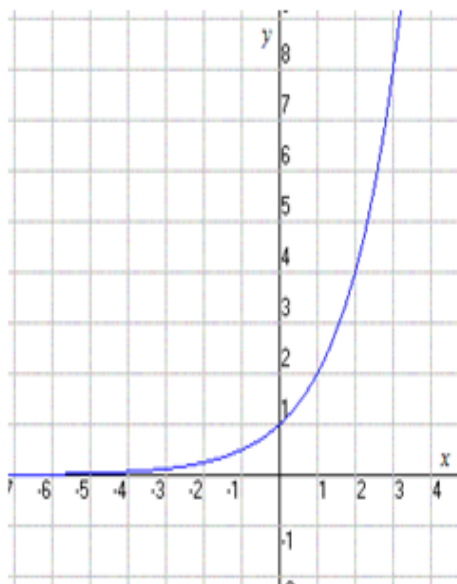**Convert each of the following:**

20. Write in intercept form: $y = x^2 - 3x + 2$

21. Write in standard form: $y = -2(3x - 2)^2 - 5$

22. Write in vertex form: $y = -2x^2 + 6x - 3$

Topics from Unit 4:

19. Find the characteristics of the following graph.

Domain: _____   Range: _____

X-intercept: _____   Y-intercept: _____

Increasing or Decreasing: _____

End Behavior: As x →∞, y → _____

As x →-∞, y → _____

Rate of change from x = 1 to 3. _____