

Algebra 1 AIR Questions for CH 8

1 – Place an x in the table where the equations are equivalent

	$(x + 5)(x - 2)$	$(x + 1)(x + 7)$	$(x - 4)(x + 3)$	$(x + 10)(x + 2)$
$x^2 + 8x + 7$				
$x^2 - x - 12$				
$x^2 + 3x - 10$				
$x^2 + 12x + 20$				

2 – State the zeros of the following equations:

a. $y = (x - 3)(x + 8)$

b. $y = (x + 2)(x - 5)$

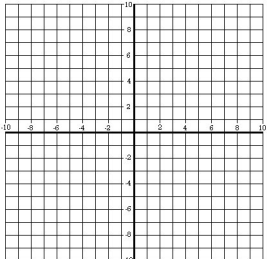
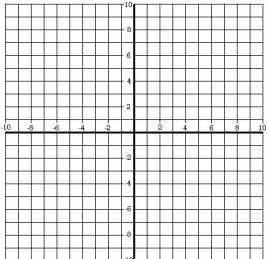
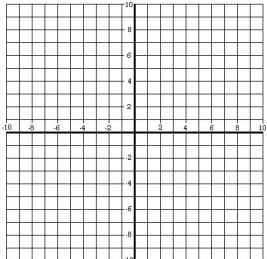
c. $y = x(2x - 1)$

d. $y = x^2 + 11x + 10$

e. $y = x^2 - 36$

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

3 – State the features of the given functions

	$f(x) = x(x - 8)$	$g(x) = x^2 + 6x + 8$	$h(x) = 4x^2 - 100$
zeros			
y-intercept			
Vertex Hint: $x = -b \div (2a)$			
graph			

4 – The speed of a car in mps is described by the equation $s(t) = .5t^2 + 20$ where t is measured in seconds.

- Find the average rate of change for the speed from time $t = 1$ to $t = 3$ seconds.
- Find the average rate of change for the speed from time $t = 2$ to $t = 10$ seconds.

5 – Use the graph at the right to answer the following questions.

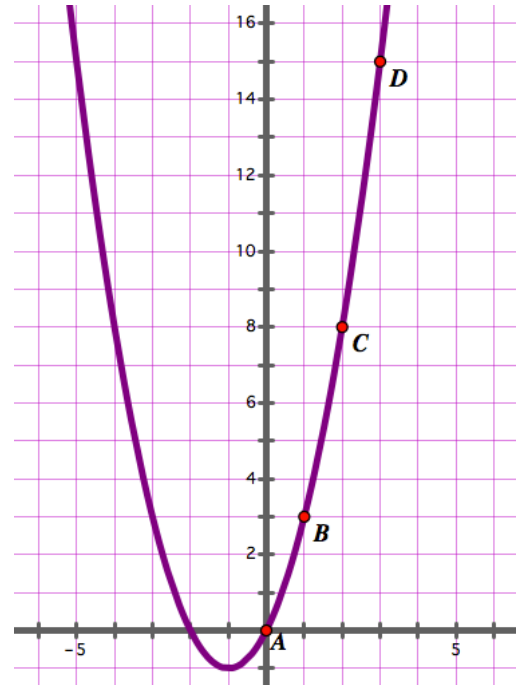
- State the y-intercept
- State the zeros
- Use the zeros to state the equation
- Between which of the following points is the average rate of change the greatest

Between A and B

Between B and C

Between C and D

Between B and D



6 – Consider the two functions

$$f(x) = x^2 + 2x$$

$$g(x) = -x^2 - 2x + 6$$

- Find $3f(x)$
- Find $f(2x)$
- Find $f(x) + g(x)$
- Find $f(x) - g(x)$
- Find $f(x + 1)$
- Find all x values where $f(x) = g(x)$