10.6 CA Name: _____

Factor Completely.		
1. $28k^3 - 4k^2 - 35k + 5$	2. $12r^3 + 20r^2 + 15r + 25$	3. $28x^4 + 112x^3 - 21x^2 - 84x$
4. $15x^3 - 12x^2 + 120x - 96$	5. $-50x^3 + 20x^2 - 100x + 40$	6. $12x^4 - 30x^3 + 60x^2 - 150x$
Solve the following polynomial equations.		
7. $x^3 - x^2 - 3x + 3 = 0$	8. $x^3 + 3x^2 - 4x - 12 = 0$	9. $x^4 + 5x^3 + 5x^2 + 25x = 0$

Find the zeros of the function by rewriting the function in intercept form.		
10) $y = x^2 + 7x - 30$	11) $f(x) = x^2 - 4x - 32$	12) $f(x) = x^2 + 11x$

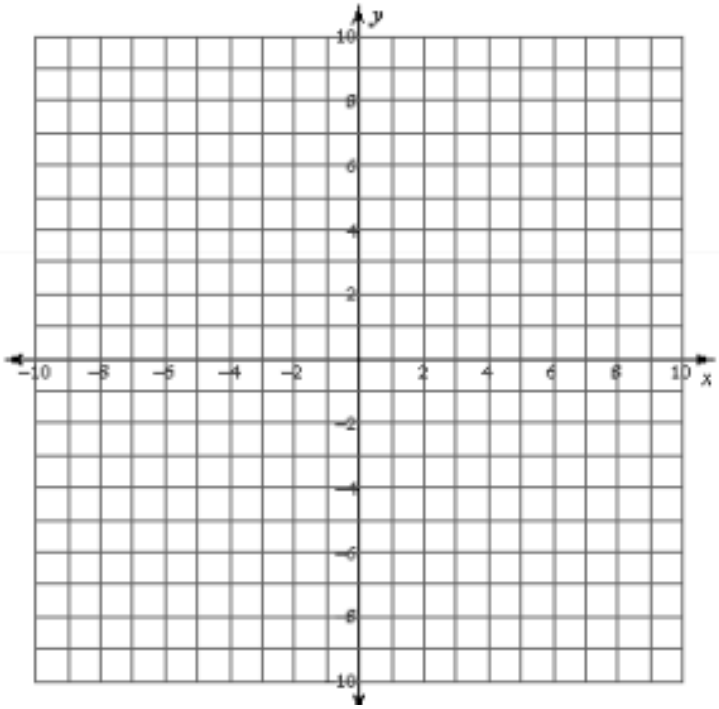
13) $g(x)=3x^2-8x+5$	14) $f(x)=3x^2-3x$	15) $y=x^2+6x-27$
16)What are the roots of the equation $3x^3+2x^2-3x-2=0$		

17) **Graphing Quadratic Equations**

Use the function $f(x) = x^2 + 2x - 8$ to answer the following.

a) Complete the table. Plot points on the graph.

X	$f(x) = x^2 + 2x - 8$	F(x)	(x,y)
-5			
-3			
-2			
-1			
0			
1			
3			



b) Put the function into factored form.

c) What shape does the graph make?

d) How do the zeroes relate to the graph?

e) How do the zeroes relate to the graph?