MATH 4 HOMEWORK WEEK 4 Name_____ Period_____

1. Factor the following expressions, which all have a COMMON FACTOR.

(a) $10x + 8$

(b) $4x + 6$

(c) $15x + 25$

(d) $9x - 12$

(e) $20x + 70$

(f) $33x - 55$

These are a little trickier:

(g) $8x^2 - 24x$

(h) $44x^2 - 33x$

(i) $30x^2 - 36x$

(j) $18x^2 - 45x$

(k) $32x^2 + 24x$

2. Factor the following TRINOMIAL QUADRATICS, which all have a = 1.

(a) $x^2 + 6x + 5$

$$(x + 5)(x + 1)$$

(b) $x^2 + 6x + 8$

(c) $x^2 + 7x + 10$

(d) $x^2 + 7x + 12$

(e) $x^2 + 8x + 15$

(f) $x^2 + 9x + 20$

(g) $x^2 + 15x + 14$

(h) $x^2 + 6x + 9$

(i) $x^2 + 11x + 24$

MATH 4 HOMEWORK WEEK 4 Name_____ Period_____

3. Solve the following equations by factoring:

(a) $x^2 + 9x - 36 = 0$

$(x + 12)(x - 3) = 0$ So either $(x + 12) = 0$ or $(x - 3) = 0$

$x = -12$ or $x = 3$

(b) $x^2 + 2x - 8 = 0$

(c) $x^2 - 4x - 5 = 0$

(d) $x^2 + 14x - 15 = 0$

(e) $x^2 - 4x - 12 = 0$

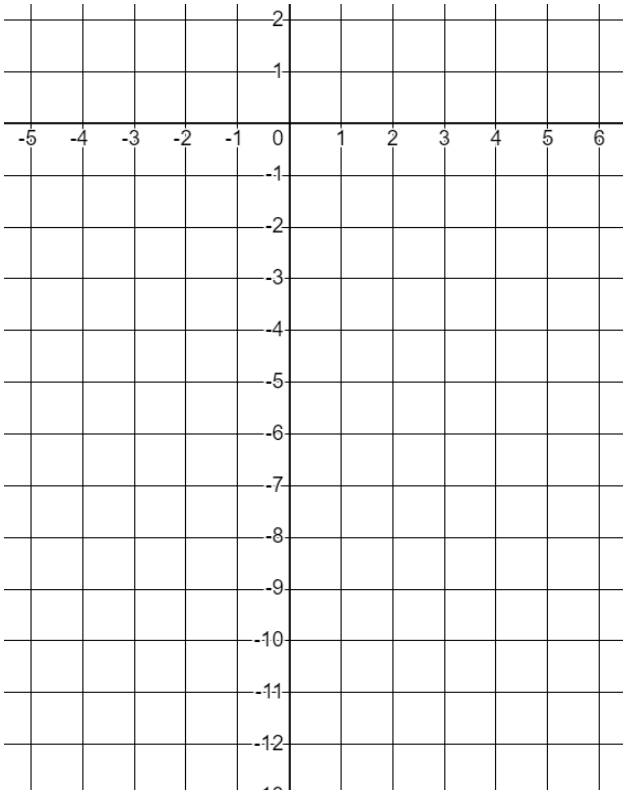
(f) $x^2 - 5x - 14 = 0$

(g) $x^2 + 6x - 16 = 0$

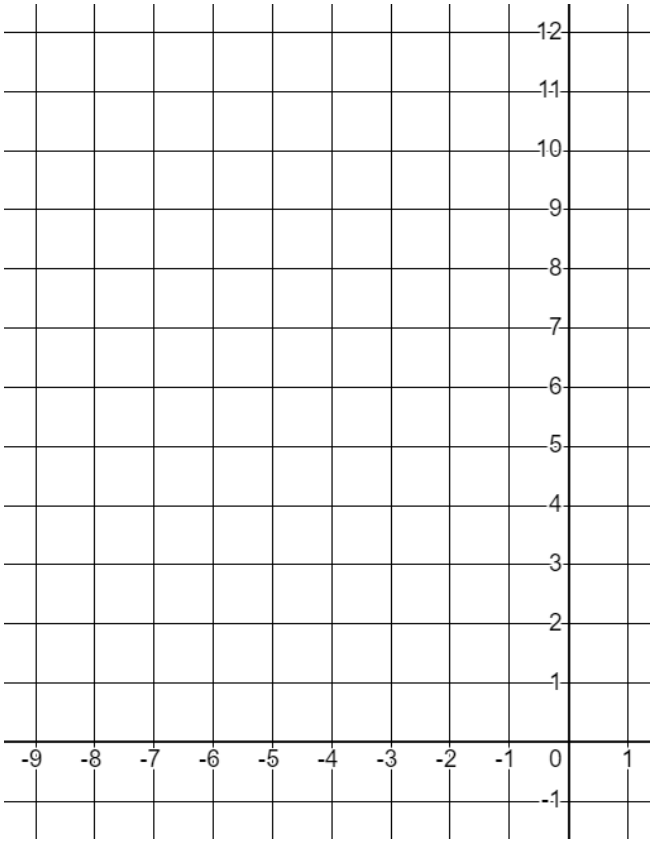
(h) $x^2 - x - 20 = 0$

4. Find the vertex, roots and y-intercept for the following quadratic functions and plot the graph.

(a) $x^2 + x - 12$

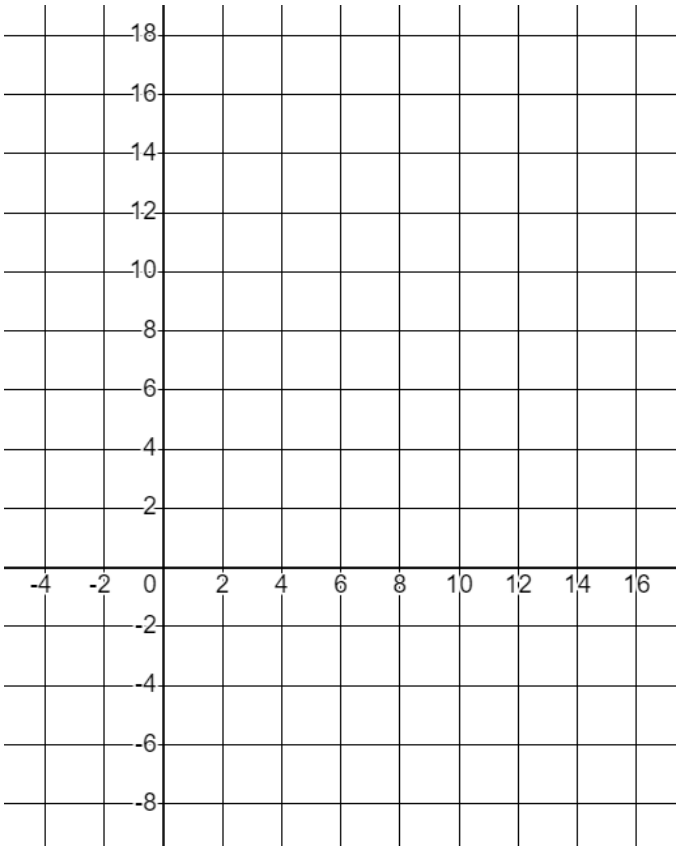


(b) $x^2 - 7x + 12$

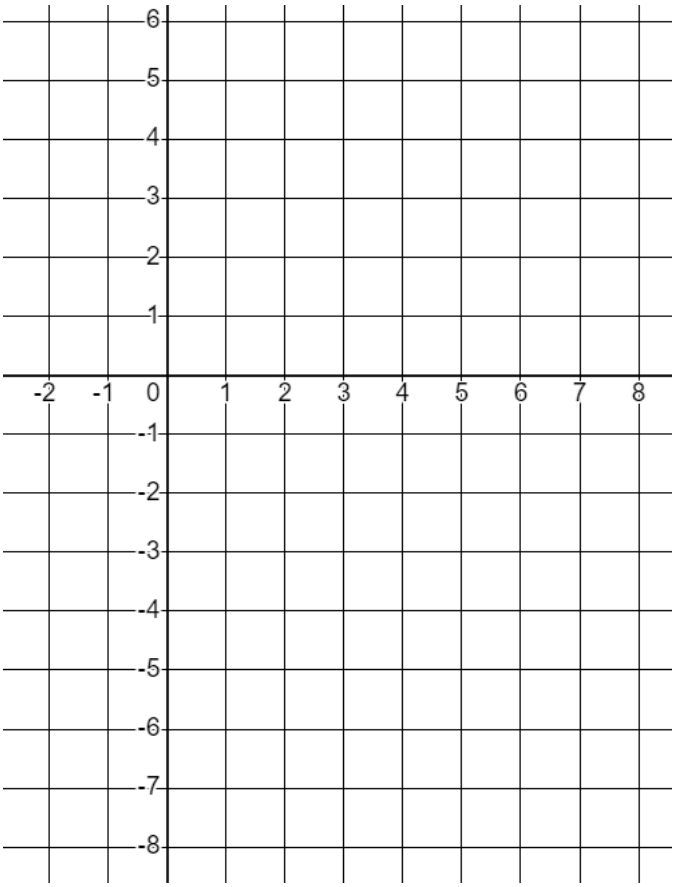


MATH 4 HOMEWORK WEEK 4 Name_____ Period_____

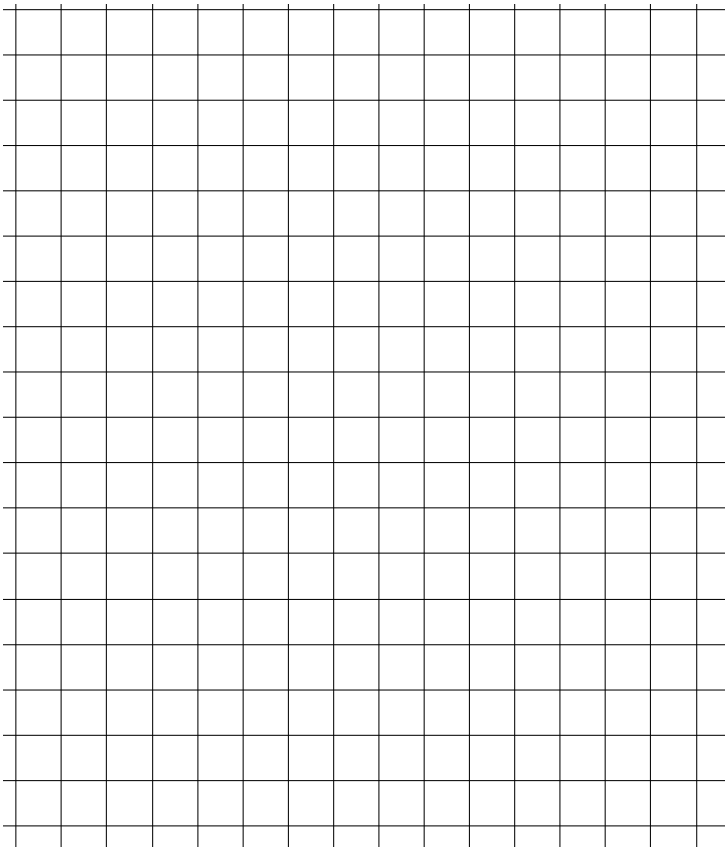
(c) $x^2 - 10x + 16$



(d) $x^2 - 6x$



(e) $x^2 + 7x - 8$



(f) $x^2 - 5x + 4$