Algebra 2 Name_____ ID: 1

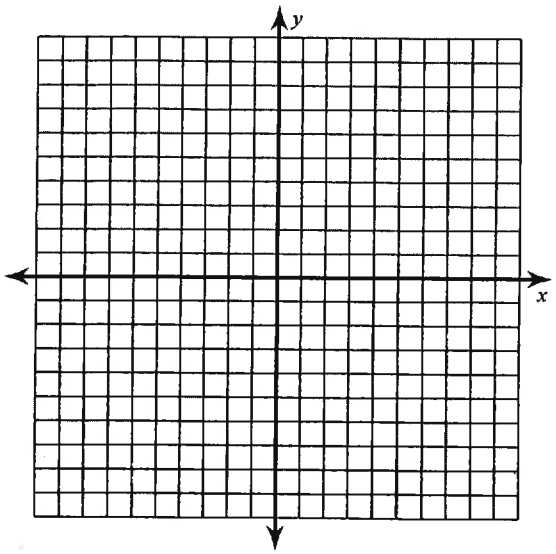
4.3 Graphing with x-intercepts: y = a (x - p) (x - q)

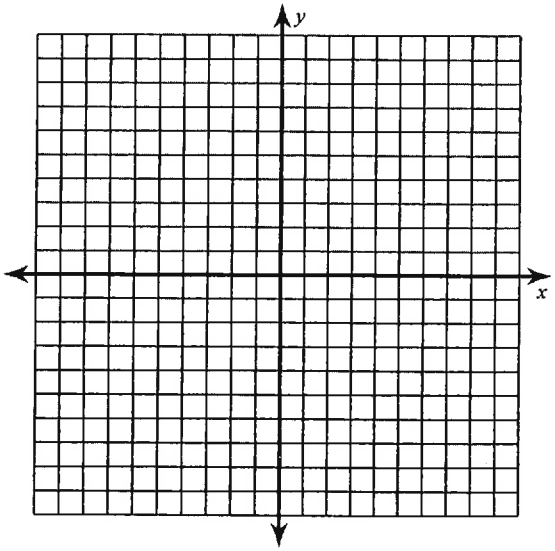
Date_____

Identify the x-intercepts. Find and label the axis of symmetry. Identify the vertex (tell whether it is a max. or min. point) and the y-intercept. Sketch the graph. Give the range for each.

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

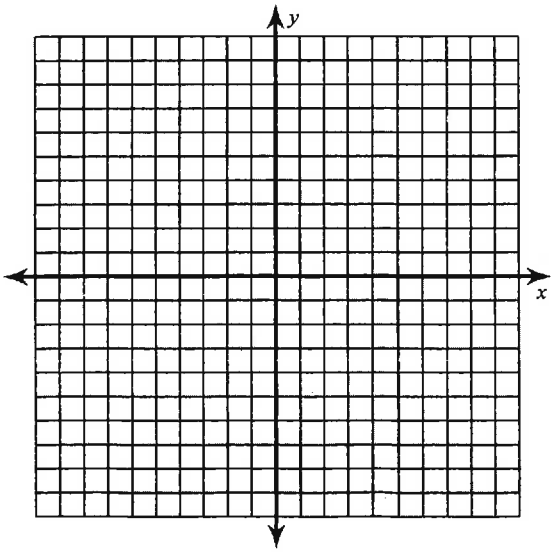
2) $-\frac{1}{3}(x-5)(x+1)=y$

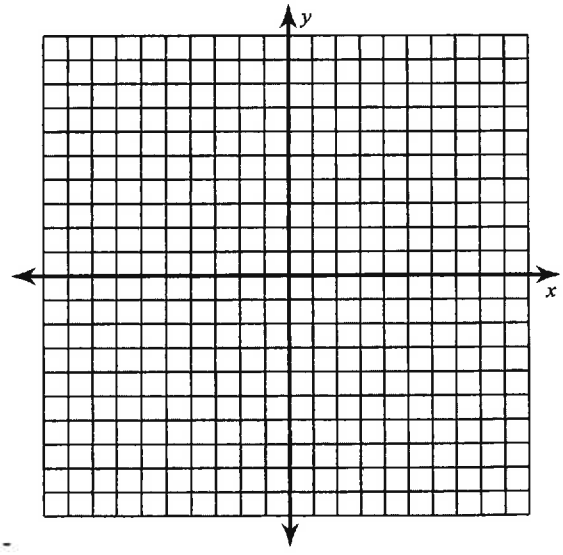




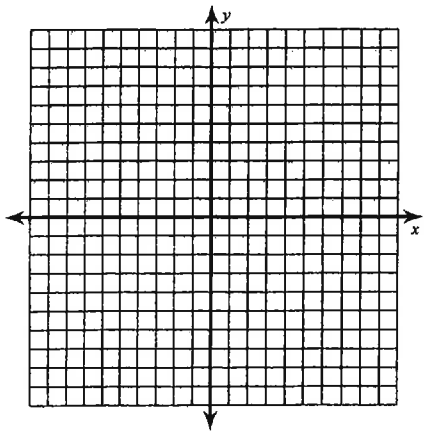
3) $-(x+1)(x+3)=y$

4) $(x-2)(x-8)=y$

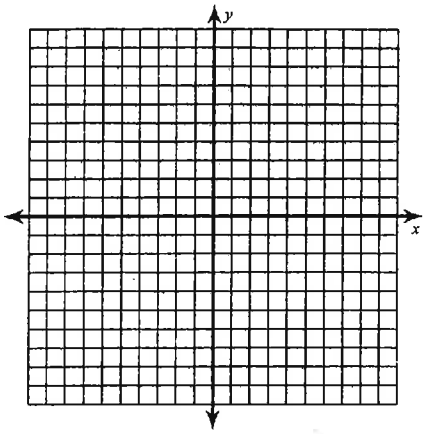




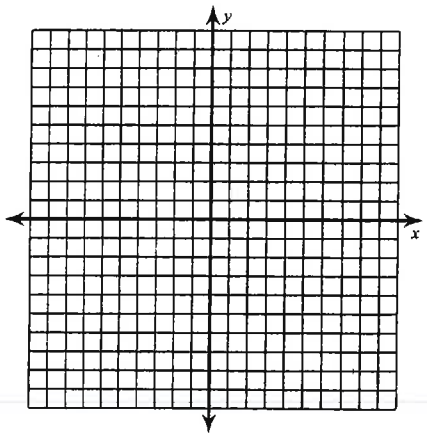
5) $2(x+1)(x-3)=y$



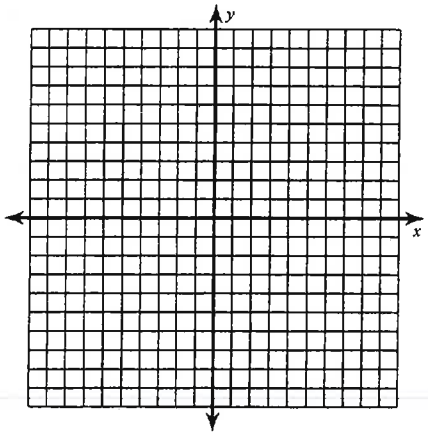
6) $(x-5)(x-2)=y$



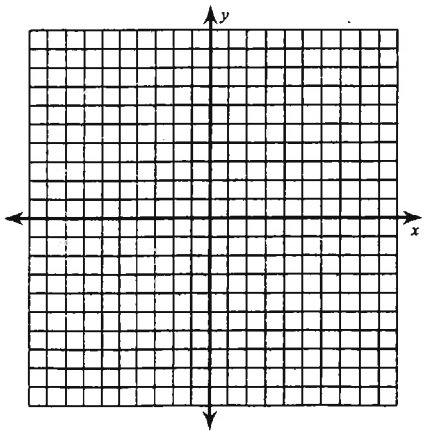
7) $-(x-3)(x-7)=y$



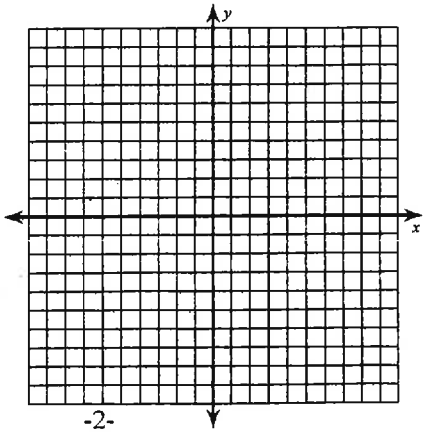
8) $\frac{1}{4}(x+7)(x-1)=y$



9) $(x+4)(x-1)=y$



10) $-3(x-6)(x-8)=y$



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4.3 Rewriting in Vertex Form

Period____

Rewrite each in vertex form.

11) $y = x^2 - 2x + 3$

12) $y = -x^2 + 2x + 2$

13) $y = -2x^2 - 12x - 16$

14) $y = -3x^2 - 18x - 31$

15) $y = x^2 - 4x$

16) $y = x^2 - 6x + 7$

17) $y = \frac{1}{2}x^2 + 2x + 3$

18) $y = \frac{1}{2}x^2 + 4x + 4$

19) $y = \frac{1}{4}x^2 + 2x + 1$

20) $y = 3x^2 + 6x + 6$