MPM 2D

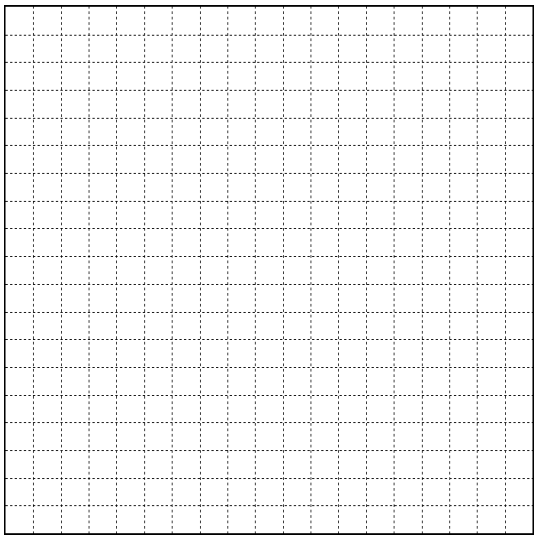
FACTORED FORM of a QUADRATIC RELATION

Factored Form of a quadratic relation is $y = a(x - r_1)(x - r_2)$.

EXAMPLE 1: Is the graph of the relation $y = 2(x + 1)(x - 5)$ a parabola?
If so, in what direction does it open? Justify your answer.

Complete the table of values.

x	$y = 2(x + 1)(x - 5)$	1st	2nd
-3	$2(-3 + 1)(-3 - 5) =$		
-2			
-1			
0			
1			
2			
3			

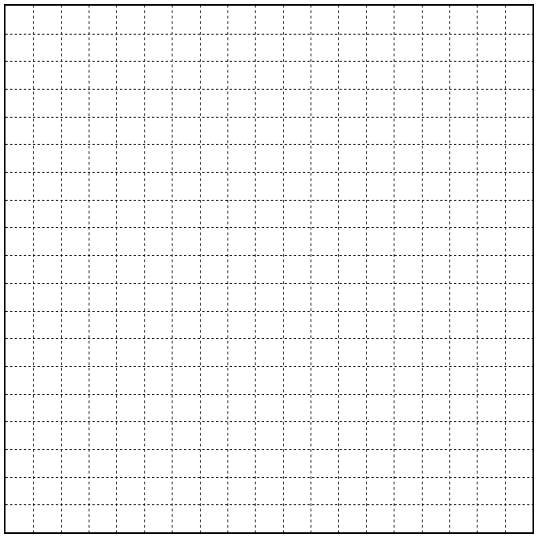


Note the step property for this quadratic relation = _____

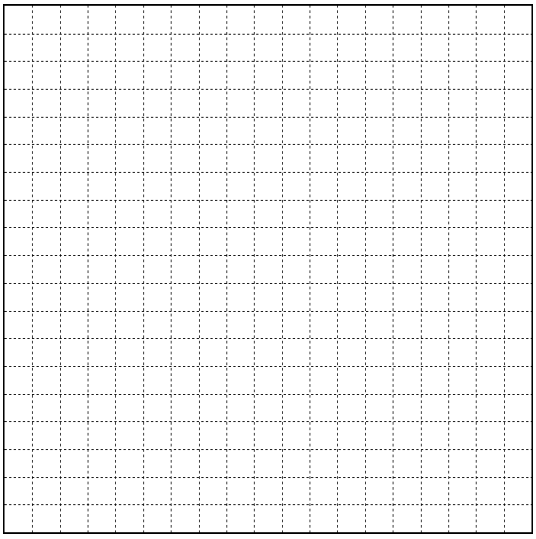
EXAMPLE 2: For each quadratic relation,

- Determine the y −intercept, zeros, axis of symmetry, and vertex.
- Sketch the graph.

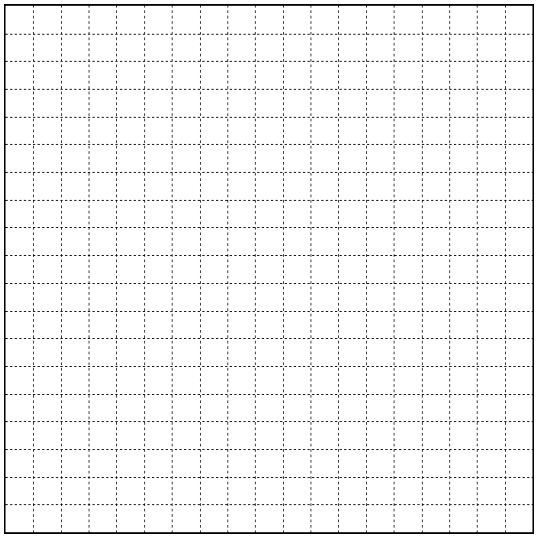
A) $y = 2(x - 4)(x + 2)$



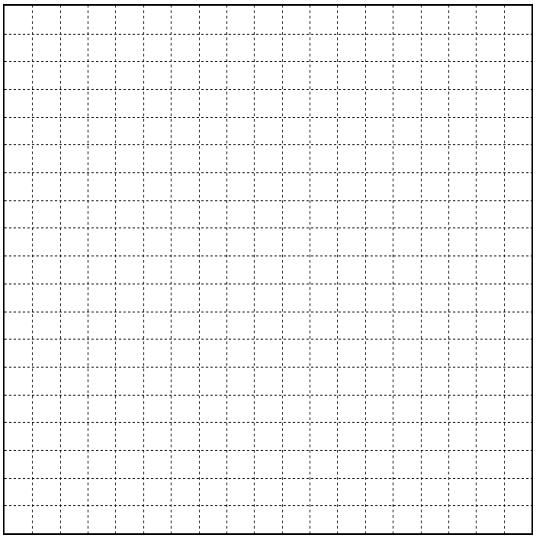
B) $y = -\frac{1}{2}(x+3)^2$



C) $y = 2x(x+4)$



D) $y = -(x+1)(x-5)$



E) $y = 2(x-4)^2$