DAY 9 – Finding the Vertex of a Quadratic

Practice FACTORED FORM

Complete the chart.

Quadratic	Zeros or x-int	x (axis of symm)	y (optimal val or max/min value)	Vertex and vertex Form	Convert to standard form	y-int
1. $y=(x+1)(x-5)$						
2. $y=-(x-4)(x+2)$						

Practice STANDARD FORM

Complete the chart.

Quadratic	y-int	Zeros or x-int	x (axis of symm)	y (optimal val or max/min value)	Vertex and vertex form
3. $y=x^2-25$					
4. $y=-2x^2+4x+16$					

Practice VERTEX FORM

Complete the chart.

Quadratic	Vertex	Is the vertex a max or a min?	Convert to standard form
5. $y=(x+3)^2-6$			
6. $y=-x^2+10$			
7. $y=2(x+1)^2$			

8. A path of a kicked soccer ball is given by $h=-0.025d^2+d$, where d is horizontal distance, in m, from the point where the ball was kicked and h is the height of the ball above the ground.

    a. When the ball touches the ground again, how far away is it?

    b. What is the maximum height reached by the ball?

9. The path of a tennis ball can be modelled by the function $y=-0.02x^2+0.26x+0.6$, where x is the horizontal distance from the player, in m, and y is the height above the ground, in m.

    a. Find where the ball will hit the ground.

    b. Find the maximum height the ball reaches