

### Calculator Instructions

Do this **every time** you get the **calculator for the day**.

1.  $2^{\text{nd}}$  + 7 1 2
2.  $2^{\text{nd}}$  0  $x^{-1}$  DiagonosticOn  
enter enter
3.  $2^{\text{nd}}$  Window (change)  
Indpnt to ASK

Starter

16 JAN 2019

Explain in complete sentences what the -3 coefficient of  $x^2$  would tell you about the function,  $y = -3x^2 + 4x - 2$ .

#### Practice Worksheet: Graphing Quadratic Functions in Standard Form

- 1] For any quadratic of the form  $y = ax^2 + c$ , the axis of symmetry is always the line  $x = 0$ .
- 2] If the axis of symmetry of a quadratic is  $x = 2$  and  $(-1, 3)$  is on the graph, then the point  $(5, 3)$  must also be on the graph.
- 3] For any quadratic of the form  $y = ax^2 + c$ , the y-intercept is always the same point as the vertex.
- 4] The graph of  $y = 2x^2 + 4x + 3$  passes through the point  $(1, 9)$  and  $(-1, 3)$ .

$(50, 5, 203)$

$2 \times 10^6$

2,000,000

ooooo! 2 E - 5

5]  $y = x^2 - 4x + 8$   
 $a = 1$   $b = -4$   $c = 8$   
 Opens up or down?  
 Is vertex a max or min?  
 y-intercept:  $(0, 8)$   
 Axis of Symmetry is  $x = 2$   
 Vertex:  $(2, 4)$

13] A baker has modeled the monthly operating costs for making wedding cakes by the function  $y = \frac{1}{2}x^2 - 12x + 150$  where  $y$  is the total cost in dollars and  $x$  is the number of cakes prepared.  
 A] What is the minimum operating cost?  
 The min. operating cost is \$78.  
 B] How many cakes should be prepared to yield the minimum operating cost?  
 They should prepare 12 Cakes to yield the min. operating cost.

Finish worksheet and turn in before you leave.