Algebra 1   Bellwork   Friday, April 24, 2015

1. Write an equation for a parabola to fits the following description.
a) The Vertex is at the point $(0, -5)$ and the parabola opens up.

b) The parabola opens down but the Line of Symmetry is to the left of the y-axis.

2. Find two factors of each number such that one of the factors is the largest perfect square possible.
a) 363   b) 704   c) 396

3. Simplify each square root.

a) $\sqrt{245}$ b) $\sqrt{126}$ c) $\sqrt{567}$

4. Find the y-int of each parabola.
a) $y = 9x^2 + 72x$ b) $y = -3x^2 - 13$

5. Find the coordinates of the vertex for each parabola.
a) $y = 4x^2 - 12$ b) $y = -2x^2 + 9x$

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1. Write an equation for a parabola to fits the following description.
a) The Vertex is at the point $(0, -5)$ and the parabola opens up.   EX: $y = 3x^2 - 5$
   a is pos $c = -5$ $b = 0$

b) The parabola opens down but the Line of Symmetry is to the left of the y-axis.

   a is neg   & $\frac{-b}{2a}$ is neg $\rightarrow$ b is neg $c = $ anything   ex $y = -2x^2 - 8$
   (opens down)

2. Find two factors of each number such that one of the factors is the largest perfect square possible.
a) 363 $121 \cdot 3$ b) 704   c) 396
                                   $64 \cdot 11$ $36 \cdot 11$

3. Simplify each square root.

a) $\sqrt{245} = 7\sqrt{5}$ b) $\sqrt{126} = 3\sqrt{14}$ c) $\sqrt{567} = 9\sqrt{7}$
   $49 \cdot 5$ $9 \cdot 14$ $81 \cdot 7$

4. Find the y-int of each parabola.
a) $y = 9x^2 + 72x$ b) $y = -3x^2 - 13$
   y-int $= 0$ y-int $= -13$

5. Find the coordinates of the vertex for each parabola.
a) $y = 4x^2 - 12$ b) $y = -2x^2 + 9x$
   $(0, -12)$ LOS $x = \frac{-9}{2(-2)} = 2.25$
                                       $(2.25, 10.125)$

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