IM2 – 3.3 (P – bV2) Write Factored & Standard Forms from Key Characteristics

F.IF.4, F.IF.5, F.IF.6

Name: _____ Per: _____ Date: _____

Directions - *Write the factored form using the following descriptions.*

1. Write a quadratic function that represents a parabola that opens upward, has x-intercepts (3, 0) and (-5, 0), and is stretched by 2. Then, write it in standard form.

2. Write a quadratic function that represents a parabola that opens downward, has x-intercepts $(-1, 0)$ and $(-6, 0)$, and is compressed by $\frac{1}{2}$. Then, write it in standard form.

3. Write a quadratic function that represents a parabola that opens downward, has x-intercepts $(4, 0)$ and $(12, 0)$, and is compressed by $\frac{1}{4}$. Then, write it in standard form.

4. Write a quadratic function that represents a parabola that opens upward, has x-intercepts $(-2, 0)$ and $(7, 0)$, and is stretched by 3. Then, write it in standard form.

5. Write a quadratic function that represents a parabola that opens upward, has x-intercepts $(10, 0)$ and $(12, 0)$, and is neither stretched nor compressed. Then, write it in standard form.

6. Write a quadratic function that represents a parabola that opens upward, has the following roots: $8 \ and \ 9$, and is stretched by 4. Then, write it in standard form.

7. Write a quadratic function that represents a parabola that opens upward, has the zeros at $x = 1 \ \ and \ \ x = 15$, and is compressed by 0.25. Then, write it in standard form.

8. Write a quadratic function that represents a parabola that opens upward, has the following roots: $70 \ and \ 40$, and is compressed by $\frac{1}{2}$. Then, write it in standard form.

9. Write a quadratic function that represents a parabola that opens upward, has the zeros at $x = -2 \ \ and \ \ x = 8$, and is stretched by 6. Then, write it in standard form.

10. Write a quadratic function that represents a parabola that opens upward, has the following roots: $-0.5 \ \ and \ \ 300$, and is stretched by 5. Then, write it in standard form.