

IM2 – 3.3 (P – cV1) Key Characteristics of Factored & Standard Form Equations

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



Name: _____ Per: _____ Date: _____

Directions - Identify factored form characteristics from the following functions & convert to standard form.

- $f(x) = (x - 7)(x - 6)$ Convert to Standard Form & ID y-int:
 - Roots: _____ & _____ Zeros: _____ & _____
 - x-intercepts: _____
 - Parabola Opens: _____ & has a min / max.
 - Parabola is stretched by _____, compressed by _____, neither. y-intercept: (_____, _____)
- $f(x) = (x + 3)(x + 3)$ Convert to Standard Form & ID y-int:
 - Roots: _____ & _____ Zeros: _____ & _____
 - x-intercepts: _____
 - Parabola Opens: _____ & has a min / max.
 - Parabola is stretched by _____, compressed by _____, neither. y-intercept: (_____, _____)
- $f(x) = -(x - 9)(x + 9)$ Convert to Standard Form & ID y-int:
 - Roots: _____ & _____ Zeros: _____ & _____
 - x-intercepts: _____
 - Parabola Opens: _____ & has a min / max.
 - Parabola is stretched by _____, compressed by _____, neither. y-intercept: (_____, _____)
- $f(x) = 3(x + 1)(x - 4)$ Convert to Standard Form & ID y-int:
 - Roots: _____ & _____ Zeros: _____ & _____
 - x-intercepts: _____
 - Parabola Opens: _____ & has a min / max.
 - Parabola is stretched by _____, compressed by _____, neither. y-intercept: (_____, _____)
- $f(x) = -\frac{1}{4}(x + 2)(x - 8)$ Convert to Standard Form & ID y-int:
 - Roots: _____ & _____ Zeros: _____ & _____
 - x-intercepts: _____
 - Parabola Opens: _____ & has a min / max.
 - Parabola is stretched by _____, compressed by _____, neither. y-intercept: (_____, _____)

6. $f(x) = -2(x - 1)(x - 7)$

Convert to Standard Form & ID y-int:

- Roots: _____ & _____ Zeros: _____ & _____
- x-intercepts: _____
- Parabola Opens: _____ & has a min / max.
- Parabola is wider / narrower than parent function.

y-intercept: (_____ , _____)

7. $f(x) = (x + 4)(x - 4)$

Convert to Standard Form & ID y-int:

- Roots: _____ & _____ Zeros: _____ & _____
- x-intercepts: _____
- Parabola Opens: _____ & has a min / max.
- Parabola is wider / narrower than parent function.

y-intercept: (_____ , _____)

8. $f(x) = -(x - 7)(x + 7)$

Convert to Standard Form & ID y-int:

- Roots: _____ & _____ Zeros: _____ & _____
- x-intercepts: _____
- Parabola Opens: _____ & has a min / max.
- Parabola is wider / narrower than parent function.

y-intercept: (_____ , _____)

9. $f(x) = 0.5(x + 10)(x - 8)$

Convert to Standard Form & ID y-int:

- Roots: _____ & _____ Zeros: _____ & _____
- x-intercepts: _____
- Parabola Opens: _____ & has a min / max.
- Parabola is wider / narrower than parent function.

y-intercept: (_____ , _____)

10. $f(x) = \frac{1}{2}(x - 6)(x + 12)$

Convert to Standard Form & ID y-int:

- Roots: _____ & _____ Zeros: _____ & _____
- x-intercepts: _____
- Parabola Opens: _____ & has a min / max.
- Parabola is wider / narrower than parent function.

y-intercept: (_____ , _____)