

Finding Roots and Converting to Standard Form

Date _____ Period _____

Find all roots.

1) $(x + 5)(2x - 1)(2x + 1) = 0$

2) $(3x + 5)(x^2 - 3) = 0$

3) $x(5x - 4)(x + 3) = 0$

4) $(4x + 3)(x^2 - 5) = 0$

5) $(2x - 3)(x^2 - 3) = 0$

Find all zeros.

6) $f(x) = x(3x + 2)(x + 2)$

7) $f(x) = x(2x + 5)(x + 5)$

8) $f(x) = x(5x + 3)(x + 3)$

9) $f(x) = x(5x - 2)(x + 3)$

10) $f(x) = x(5x + 2)(x - 2)$

Solve each equation by factoring.

11) $v^2 = -14 - 9v$

12) $r^2 + 9 = -6r$

13) $x^2 + 7x = 0$

14) $p^2 = 3p$

15) $x^2 = 4x$

Simplify the equation to standard form.

16) $f(x) = 2(x - 1)^2 + 3$

17) $f(x) = (x - 3)^2 - 2$

18) $f(x) = \frac{1}{2}(x - 2)^2 - 3$

19) $f(x) = -(x + 2)^2 + 4$

20) $f(x) = -2(x + 3)^2 - 1$