

Solve by Factoring

Key
No work

1. $2x^2 - 7x - 22 = 0$

$x = -2$

$x = \frac{11}{2}$

2. $3x^2 + 19x + 6 = 0$

$x = -\frac{1}{3}$

$x = -6$

3. $15x^2 + 4x - 4 = 0$

$x = -\frac{2}{3}$

$x = \frac{2}{5}$

4. $4x^2 - 12x - 7 = 0$

$x = -\frac{1}{2}$

$x = \frac{7}{2}$

5. $6x^2 + 13x - 8 = 0$

$x = \frac{1}{2}$

$x = -\frac{8}{3}$

6. $4x^2 + 17x + 15 = 0$

$x = -3$

$x = -\frac{5}{4}$

7. $100x^2 - 9 = 0$

$x = -\frac{3}{10}$

$x = \frac{3}{10}$

8. $9x^2 - 25 = 0$

$x = -\frac{5}{3}$

$x = \frac{5}{3}$

9. $64x^2 - 1 = 0$

$x = -\frac{1}{8}$

$x = \frac{1}{8}$

Write the Equation given the Root(s) and Ordered Pair

1. $x = 4 - 2i$ thru $(1, -39)$

$$y = -3(x^2 - 8x + 20)$$

$$y = -3x^2 + 24x - 60$$

2. $x = -3i, x = 2$ with y-intercept of 9

$$y = -\frac{1}{2}(x^3 - 2x^2 + 9x - 18)$$

3. $x = 4, x = 1, x = -2$ thru $(-1, 20)$

$$y = 2(x^3 - 3x^2 - 6x + 8)$$

$$y = 2x^3 - 6x^2 - 12x + 16$$

4. $x = 2 + i$ thru $(-3, 13)$

$$y = \frac{1}{2}(x^2 - 4x + 5)$$

5. $x = 5 + 2i, x = -1$ thru $(2, 3)$

$$y = \frac{1}{13}(x^3 - 9x^2 + 19x + 29)$$

6. $x = 4i, x = 1 - 3i$ with y-intercept of 16

$$y = \frac{1}{10}(x^4 - 2x^3 + 26x^2 - 32x + 160)$$