

Practice finding roots of quadratics (A2 3.4)**Find all roots of the quadratic function and write in factored form.**

1) $f(x) = x^2 + 10x + 10$

2) $f(x) = 3x^2 - 8x + 2$

3) $f(x) = x^2 + x + 4$

4) $f(x) = 2x^2 + x - 15$

5) $f(x) = 2x^2 - 13x + 15$

6) $f(x) = x^2 + 2x - 1$

7) $f(x) = x^2 - x + 6$

8) $f(x) = 2x^2 + 11x + 11$

9) $f(x) = 3x^2 - 11x - 20$

10) $f(x) = 5x^2 - 3x - 2$

$$11) f(x) = 2x^2 - 5x - 2$$

$$12) f(x) = 5x^2 + 9x - 2$$

$$13) f(x) = 2x^2 + 5x - 25$$

$$14) f(x) = x^2 + 5x + 7$$

$$15) f(x) = -3x^2 + 2x - 3$$

$$16) f(x) = 15x^2 - 13x + 2$$

$$17) f(x) = 2x^2 + 11x + 3$$

$$18) f(x) = 10x^2 - 19x + 6$$

$$19) f(x) = 4x^2 + 12x + 9$$

$$20) f(x) = 4x^2 - 5x - 2$$

Answers to Practice finding roots of quadratics (A2 3.4)

- 1) $\{-5 + \sqrt{15}, -5 - \sqrt{15}\}$ 2) $\left\{\frac{4 + \sqrt{10}}{3}, \frac{4 - \sqrt{10}}{3}\right\}$ 3) $\left\{\frac{-1 + i\sqrt{15}}{2}, \frac{-1 - i\sqrt{15}}{2}\right\}$
- 4) $\left\{\frac{5}{2}, -3\right\}$ 5) $\left\{\frac{3}{2}, 5\right\}$ 6) $\{-1 + \sqrt{2}, -1 - \sqrt{2}\}$
- 7) $\left\{\frac{1 + i\sqrt{23}}{2}, \frac{1 - i\sqrt{23}}{2}\right\}$ 8) $\left\{\frac{-11 + \sqrt{33}}{4}, \frac{-11 - \sqrt{33}}{4}\right\}$ 9) $\left\{-\frac{4}{3}, 5\right\}$
- 10) $\left\{-\frac{2}{5}, 1\right\}$ 11) $\left\{\frac{5 + \sqrt{41}}{4}, \frac{5 - \sqrt{41}}{4}\right\}$ 12) $\left\{\frac{1}{5}, -2\right\}$
- 13) $\left\{\frac{5}{2}, -5\right\}$ 14) $\left\{\frac{-5 + i\sqrt{3}}{2}, \frac{-5 - i\sqrt{3}}{2}\right\}$ 15) $\left\{\frac{1 - 2i\sqrt{2}}{3}, \frac{1 + 2i\sqrt{2}}{3}\right\}$
- 16) $\left\{\frac{2}{3}, \frac{1}{5}\right\}$ 17) $\left\{\frac{-11 + \sqrt{97}}{4}, \frac{-11 - \sqrt{97}}{4}\right\}$ 18) $\left\{\frac{3}{2}, \frac{2}{5}\right\}$
- 19) $\left\{-\frac{3}{2} \text{ mult. } 2\right\}$ 20) $\left\{\frac{5 + \sqrt{57}}{8}, \frac{5 - \sqrt{57}}{8}\right\}$