

Solving the quadratic equation: $-16x^2 + 32x + 48 = 0$:

Solving the quadratic equation: $-16x^2 + 32x + 48 = 0$:

Recall: The [Quadratic Formula](#) says r_1 and r_2 are [the roots](#) of:

$$ax^2 + bx + c = 0$$

Solving the quadratic equation: $-16x^2 + 32x + 48 = 0$:

Recall: The [Quadratic Formula](#) says r_1 and r_2 are [the roots](#) of:

$$ax^2 + bx + c = 0$$

$$r_{1,2} = \frac{-(b) \pm \sqrt{(b)^2 - 4ac}}{2a}$$

Solving the quadratic equation: $-16x^2 + 32x + 48 = 0$:

Recall: The [Quadratic Formula](#) says r_1 and r_2 are [the roots](#) of:

$$ax^2 + bx + c = 0$$
$$r_{1,2} = \frac{-(b) \pm \sqrt{(b)^2 - 4ac}}{2a}$$

Solving the quadratic equation: $-16x^2 + 32x + 48 = 0$:

Recall: The [Quadratic Formula](#) says r_1 and r_2 are [the roots](#) of:

$$ax^2 + bx + c = 0$$

$$r_{1,2} = \frac{-(b) \pm \sqrt{(b)^2 - 4ac}}{2a}$$

$$r_{1,2} = \frac{-(32) \pm \sqrt{(32)^2 - 4 \cdot -16 \cdot 48}}{2 \cdot -16}$$

Solving the quadratic equation: $-16x^2 + 32x + 48 = 0$:

Recall: The [Quadratic Formula](#) says r_1 and r_2 are [the roots](#) of:

$$ax^2 + bx + c = 0$$

$$r_{1,2} = \frac{-(b) \pm \sqrt{(b)^2 - 4ac}}{2a}$$

$$\begin{aligned} r_{1,2} &= \frac{-(32) \pm \sqrt{(32)^2 - 4 \cdot -16 \cdot 48}}{2 \cdot -16} \\ &= \frac{-32 \pm \sqrt{1024 + 3072}}{-32} \end{aligned}$$

Solving the quadratic equation: $-16x^2 + 32x + 48 = 0$:

Recall: The [Quadratic Formula](#) says r_1 and r_2 are [the roots](#) of:

$$ax^2 + bx + c = 0$$

$$r_{1,2} = \frac{-(b) \pm \sqrt{(b)^2 - 4ac}}{2a}$$

$$r_{1,2} = \frac{-(32) \pm \sqrt{(32)^2 - 4 \cdot -16 \cdot 48}}{2 \cdot -16}$$

$$= \frac{-32 \pm \sqrt{1024 + 3072}}{-32}$$

$$= \frac{-32 \pm \sqrt{4096}}{-32}$$

Solving the quadratic equation: $-16x^2 + 32x + 48 = 0$:

Recall: The [Quadratic Formula](#) says r_1 and r_2 are [the roots](#) of:

$$ax^2 + bx + c = 0$$

$$r_{1,2} = \frac{-(b) \pm \sqrt{(b)^2 - 4ac}}{2a}$$

$$r_{1,2} = \frac{-(32) \pm \sqrt{(32)^2 - 4 \cdot -16 \cdot 48}}{2 \cdot -16}$$

$$= \frac{-32 \pm \sqrt{1024 + 3072}}{-32}$$

$$= \frac{-32 \pm \sqrt{4096}}{-32}$$

$$= \frac{-32 \pm 64}{-32}$$

Solving the quadratic equation: $-16x^2 + 32x + 48 = 0$:

Recall: The [Quadratic Formula](#) says r_1 and r_2 are [the roots](#) of:

$$ax^2 + bx + c = 0$$

$$r_{1,2} = \frac{-(b) \pm \sqrt{(b)^2 - 4ac}}{2a}$$

$$r_{1,2} = \frac{-(32) \pm \sqrt{(32)^2 - 4 \cdot -16 \cdot 48}}{2 \cdot -16}$$

$$= \frac{-32 \pm \sqrt{1024 + 3072}}{-32}$$

$$= \frac{-32 \pm \sqrt{4096}}{-32}$$

$$= \frac{-32 \pm 64}{-32}$$

$$= \frac{32}{-32} \text{ and } \frac{-96}{-32}$$

Solving the quadratic equation: $-16x^2 + 32x + 48 = 0$:

Recall: The [Quadratic Formula](#) says r_1 and r_2 are [the roots](#) of:

$$ax^2 + bx + c = 0$$

$$r_{1,2} = \frac{-(b) \pm \sqrt{(b)^2 - 4ac}}{2a}$$

$$r_{1,2} = \frac{-(32) \pm \sqrt{(32)^2 - 4 \cdot -16 \cdot 48}}{2 \cdot -16}$$

$$= \frac{-32 \pm \sqrt{1024 + 3072}}{-32}$$

$$= \frac{-32 \pm \sqrt{4096}}{-32}$$

$$= \frac{-32 \pm 64}{-32}$$

$$= \frac{32}{-32} \text{ and } \frac{-96}{-32}$$

$$= -1 \text{ and } 3$$

Solving the quadratic equation: $-16x^2 + 32x + 48 = 0$:

Recall: The [Quadratic Formula](#) says r_1 and r_2 are [the roots](#) of:

$$ax^2 + bx + c = 0$$

$$r_{1,2} = \frac{-(b) \pm \sqrt{(b)^2 - 4ac}}{2a}$$

$$r_{1,2} = \frac{-(32) \pm \sqrt{(32)^2 - 4 \cdot -16 \cdot 48}}{2 \cdot -16}$$

$$= \frac{-32 \pm \sqrt{1024 + 3072}}{-32}$$

$$= \frac{-32 \pm \sqrt{4096}}{-32}$$

$$= \frac{-32 \pm 64}{-32}$$

$$= \frac{32}{-32} \text{ and } \frac{-96}{-32}$$

$$= -1 \text{ and } 3$$

The solutions to $-16x^2 + 32x + 48 = 0$ are: $x = r_{1,2} = -1, 3$