

$$(x + y)(x - y) = x^2 + \quad - \quad - y^2 = x^2 - y^2$$

$$\begin{array}{c} (x + y)(x - y) \\ \underbrace{\hspace{1.5cm}} \quad \underbrace{\hspace{1.5cm}} \\ \downarrow \quad \downarrow \\ - \end{array}$$

$$\begin{array}{c} (a + b)(a - b) \\ \underbrace{\hspace{1.5cm}} \quad \underbrace{\hspace{1.5cm}} \\ \downarrow \quad \downarrow \\ - \end{array}$$

$$\begin{array}{c} (2a + 3b)(2a - 3b) \\ \underbrace{\hspace{2.5cm}} \quad \underbrace{\hspace{2.5cm}} \\ \downarrow \quad \downarrow \\ - \end{array}$$

$$(\sqrt{x} + \sqrt{y})(\sqrt{x} - \sqrt{y})$$

A diagram illustrating the difference of two squares. The expression $(\sqrt{x} + \sqrt{y})(\sqrt{x} - \sqrt{y})$ is shown. A horizontal brace spans the entire expression. Two arrows point downwards from the plus sign and the minus sign within the expression to a minus sign centered below the brace.

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$$(a + 3)(a - 3)$$

A diagram illustrating the difference of two squares. The expression $(a + 3)(a - 3)$ is shown. A horizontal brace spans the entire expression. Two arrows point downwards from the plus sign and the minus sign within the expression to a minus sign centered below the brace.

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$$(2a + \sqrt{3})(2a - \sqrt{3})$$

A diagram illustrating the difference of two squares. The expression $(2a + \sqrt{3})(2a - \sqrt{3})$ is shown. A horizontal brace spans the entire expression. Two arrows point downwards from the plus sign and the minus sign within the expression to a minus sign centered below the brace.

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$$\frac{2}{3+\sqrt{2}} \left(\frac{3-\sqrt{2}}{3-\sqrt{2}} \right)$$

$$\frac{2(3-\sqrt{2})}{-}$$

$$\frac{6}{\sqrt{5}-\sqrt{2}} \left(\frac{\sqrt{5}+\sqrt{2}}{\sqrt{5}+\sqrt{2}} \right)$$

$$\frac{6(\sqrt{5}+\sqrt{2})}{-}$$

$$\frac{6(\sqrt{5}+\sqrt{2})}{-}$$