

Name: _____

Date: _____ Score: _____

Simplifying Radical Expressions

① $2\sqrt{45} - 2\sqrt{5}$

② $4\sqrt{50} - \sqrt{72} + \sqrt{8}$

③ $-\sqrt{x} + 6\sqrt{x} - 2\sqrt{x}$

④ $\sqrt{18a^3} \sqrt{18a^3}$

⑤ $-\frac{4\sqrt{28}}{\sqrt{4}}$

⑥ $\frac{\sqrt{a}}{\sqrt{a} + \sqrt{b}}$

⑦ $\frac{2\sqrt{5r}}{\sqrt{m^3}}$

⑧ $\sqrt[3]{3} (4 - \sqrt[3]{5})$

⑨ $(\sqrt{3} + \sqrt{5x})(\sqrt{3} - 5\sqrt{5x})$

⑩ $(4 + \sqrt{6})(1 + \sqrt{6})$

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Answers

Simplifying Radical Expressions

① $2\sqrt{45} - 2\sqrt{5}$

$$4\sqrt{5}$$

② $4\sqrt{50} - \sqrt{72} + \sqrt{8}$

$$16\sqrt{2}$$

③ $-\sqrt{x} + 6\sqrt{x} - 2\sqrt{x}$

$$3\sqrt{x}$$

④ $\sqrt{18a^3} \sqrt{18a^3}$

$$18a^3$$

⑤ $-\frac{4\sqrt{28}}{\sqrt{4}}$

$$-4\sqrt{7}$$

⑥ $\frac{\sqrt{a}}{\sqrt{a} + \sqrt{b}}$

$$\frac{\sqrt{a}(\sqrt{a} - \sqrt{b})}{a - b}$$

⑦ $\frac{2\sqrt{5r}}{\sqrt{m^3}}$

$$\frac{2\sqrt{5r}}{m\sqrt{m}}$$

⑧ $\sqrt[3]{3} (4 - \sqrt[3]{5})$

$$9\sqrt{3} - \sqrt[3]{5}$$

⑨ $(\sqrt{3} + \sqrt{5x})(\sqrt{3} - 5\sqrt{5x})$

$$3 - 4\sqrt{15x} - 25x$$

⑩ $(4 + \sqrt{6})(1 + \sqrt{6})$

$$10 + 5\sqrt{6}$$