

Name: _____

Date: _____ Score: _____

Solving Radicals

Simplify Each Radical Expression to its Simplest Form

① $\sqrt{12x^{20}y^8}$

② $\sqrt{27x^{11}y^7}$

③ $\sqrt{80x^{100}y^{49}}$

④ $\sqrt{20x^{16}y^5}$

⑤ $\sqrt{75x^8y^3}$

⑥ $\sqrt{49a^8x^{12}}$

Add or Subtract Radicals

⑦ $\sqrt{200} - \sqrt{72}$

⑧ $-6\sqrt{75} + 4\sqrt{125}$

⑨ $3\sqrt{5} - \sqrt{x} + 4\sqrt{5} + 3\sqrt{x}$

⑩ $3 + 4\sqrt{x} - 6\sqrt{x}$

Multiply and Simplify

⑪ $\sqrt[3]{(x+5)^2} \cdot \sqrt[3]{(x+5)^4}$

⑫ $\sqrt{15} \sqrt{15}$