

## Unit 3.3 Practice Divide Radicals

Period \_\_\_\_\_

**Simplify.**

1)  $\frac{\sqrt{9}}{\sqrt{4}}$

$$\frac{3}{2}$$

2)  $\frac{\sqrt{20}}{\sqrt{9}}$

$$\frac{2\sqrt{5}}{3}$$

3)  $\frac{3\sqrt{20}}{3\sqrt{45}}$

$$\frac{2}{3}$$

4)  $\frac{3\sqrt{15}}{5\sqrt{20}}$

$$\frac{3\sqrt{3}}{10}$$

5)  $\frac{3 - 4\sqrt{2}}{3\sqrt{11}}$

$$\frac{3\sqrt{11} - 4\sqrt{22}}{33}$$

6)  $\frac{5 - 4\sqrt{2}}{2\sqrt{7}}$

$$\frac{5\sqrt{7} - 4\sqrt{14}}{14}$$

7)  $\frac{5\sqrt{5} + 2}{4\sqrt{17}}$

$$\frac{5\sqrt{85} + 2\sqrt{17}}{68}$$

8)  $\frac{4 + 3\sqrt{3}}{2\sqrt{6}}$

$$\frac{4\sqrt{6} + 9\sqrt{2}}{12}$$

9)  $\frac{3\sqrt{5n^4}}{3\sqrt{2n^4}}$

$$\frac{\sqrt{10}}{2}$$

10)  $\frac{5\sqrt{4x^2}}{5\sqrt{5x^4}}$

$$\frac{2\sqrt{5}}{5x}$$

11)  $\frac{4\sqrt{2b^2} + 3\sqrt{3b}}{5\sqrt{10b^4}}$

$$\frac{8b\sqrt{5} + 3\sqrt{30b}}{50b^2}$$

12)  $\frac{5x + 4\sqrt{5x^2}}{5\sqrt{17x^2}}$

$$\frac{5\sqrt{17} + 4\sqrt{85}}{85}$$

$$13) \frac{-4 - 4\sqrt{x}}{3\sqrt{8x^4}}$$

$$\frac{-\sqrt{2} - \sqrt{2x}}{3x^2}$$

$$14) \frac{4 + 4\sqrt{3a^4b^3}}{2\sqrt{2a^2b^4}}$$

$$\frac{\sqrt{2} + a^2b\sqrt{6b}}{b^2a}$$

$$15) \frac{5\sqrt[3]{2m^2}}{5\sqrt[3]{9m^4}}$$

$$\frac{\sqrt[3]{6m}}{3m}$$

$$16) \frac{3\sqrt[4]{2n^4}}{4\sqrt[4]{64n^2}}$$

$$\frac{3\sqrt[4]{8n^2}}{16}$$

$$17) \frac{4\sqrt[3]{3a^2b}}{5\sqrt[3]{25a^2b^3}}$$

$$\frac{4\sqrt[3]{15b}}{25b}$$

$$18) \frac{5\sqrt[5]{4v^4}}{3\sqrt[5]{81v^2}}$$

$$\frac{5\sqrt[5]{12v^2}}{9}$$

$$19) \frac{5\sqrt[3]{-20v^2}}{2\sqrt[3]{36v^3}}$$

$$\frac{-5\sqrt[3]{15v^2}}{6v}$$

$$20) \frac{2n + 3\sqrt[3]{2n^4}}{3\sqrt[3]{5n^4}}$$

$$\frac{2\sqrt[3]{25n^2} + 3n\sqrt[3]{50}}{15n}$$

$$21) \frac{-2 - 3\sqrt[4]{3n^3}}{5\sqrt[4]{15n^3}}$$

$$\frac{-2\sqrt[4]{3375n} - 9n\sqrt[4]{125}}{75n}$$

$$22) \frac{-3 + 3\sqrt[3]{r}}{3\sqrt[3]{2r^3}}$$

$$\frac{-\sqrt[3]{4} + \sqrt[3]{4r}}{2r}$$

$$23) \frac{3\sqrt[3]{n^2} - 4\sqrt[3]{3n}}{4\sqrt[3]{18n^2}}$$

$$\frac{3n\sqrt[3]{12} - 4\sqrt[3]{36n^2}}{24n}$$

$$24) \frac{5 + 3\sqrt[4]{3n^4}}{2\sqrt[4]{15n}}$$

$$\frac{5\sqrt[4]{3375n^3} + 9n\sqrt[4]{125n^3}}{30n}$$