

Dividing Radicals

Period ____

Simplify.

1) $\frac{\sqrt{9}}{\sqrt{25}}$

2) $\frac{\sqrt{4}}{\sqrt{36}}$

3) $\frac{\sqrt{15}}{\sqrt{12}}$

4) $\frac{\sqrt{4}}{2\sqrt{20}}$

5) $\frac{\sqrt{4}}{4\sqrt{5}}$

6) $\frac{4\sqrt{2}}{3\sqrt{5}}$

7) $\frac{-3 - \sqrt{2}}{3\sqrt{17}}$

8) $\frac{\sqrt{3} + 3\sqrt{5}}{2\sqrt{8}}$

9) $\frac{\sqrt{3}}{-1 - \sqrt{5}}$

10) $\frac{\sqrt{5}}{5 + \sqrt{2}}$

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

12) $\frac{-4 + \sqrt{3}}{-1 - 2\sqrt{5}}$

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

14) $\frac{3}{-4k^2 - 5\sqrt{k^4}}$

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

16) $\frac{3}{\sqrt{5x} - 3}$

$$17) \frac{\sqrt[5]{12}}{4\sqrt[5]{-4}}$$

$$18) \frac{\sqrt[3]{10}}{\sqrt[3]{625}}$$

$$19) \frac{\sqrt[5]{2}}{3\sqrt[5]{162}}$$

$$20) \frac{3\sqrt[4]{4}}{2\sqrt[4]{8}}$$

$$21) \frac{\sqrt[4]{5}}{4\sqrt[4]{27}}$$

$$22) \frac{\sqrt[3]{10}}{\sqrt[3]{32}}$$

$$23) \frac{-5 + 5\sqrt[4]{5}}{3\sqrt[4]{6}}$$

$$24) \frac{3 + \sqrt[3]{3}}{\sqrt[3]{9}}$$

$$25) \frac{-2x + \sqrt[3]{-5x^4y^3}}{3\sqrt[3]{15x^3y}}$$

$$26) \frac{3 - \sqrt[4]{5k^2}}{\sqrt[4]{3k^3}}$$

Dividing Radicals

Period _____

Simplify.

1) $\frac{\sqrt{9}}{\sqrt{25}}$

$$\frac{3}{5}$$

3) $\frac{\sqrt{15}}{\sqrt{12}}$

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

5) $\frac{\sqrt{4}}{4\sqrt{5}} \cdot \frac{\sqrt{5}}{10}$

7) $\frac{-3 - \sqrt{2}}{3\sqrt{17}}$

$$\frac{-3\sqrt{17} - \sqrt{34}}{51}$$

9) $\frac{\sqrt{3}}{-1 - \sqrt{5}}$

$$\frac{\sqrt{3} - \sqrt{15}}{4}$$

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

$$4 - 2\sqrt{5} - 2\sqrt{3} + \sqrt{15}$$

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

$$\frac{-12 + 4\sqrt{5} - 9\sqrt{2} + 3\sqrt{10}}{4}$$

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

$$\frac{6 + 2x\sqrt{3}}{9 - 3x^2}$$

2) $\frac{\sqrt{4}}{\sqrt{36}}$

$$\frac{1}{3}$$

4) $\frac{\sqrt{4}}{2\sqrt{20}} \cdot \frac{\sqrt{5}}{10}$

6) $\frac{4\sqrt{2}}{3\sqrt{5}} \cdot \frac{4\sqrt{10}}{15}$

8) $\frac{\sqrt{3} + 3\sqrt{5}}{2\sqrt{8}}$

$$\frac{\sqrt{6} + 3\sqrt{10}}{8}$$

10) $\frac{\sqrt{5}}{5 + \sqrt{2}}$

$$\frac{5\sqrt{5} - \sqrt{10}}{23}$$

12) $\frac{-4 + \sqrt{3}}{-1 - 2\sqrt{5}}$

$$\frac{-4 + 8\sqrt{5} + \sqrt{3} - 2\sqrt{15}}{19}$$

14) $\frac{3}{-4k^2 - 5\sqrt{k^4}}$

$$-\frac{1}{3k^2}$$

16) $\frac{3}{\sqrt{5x} - 3}$

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

$$17) \frac{\sqrt[5]{12}}{4\sqrt[5]{-4}}$$

$$-\frac{\sqrt[5]{3}}{4}$$

$$18) \frac{\sqrt[3]{10}}{\sqrt[3]{625}}$$

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

$$19) \frac{\sqrt[5]{2}}{3\sqrt[5]{162}}$$

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

$$20) \frac{3\sqrt[4]{4}}{2\sqrt[4]{8}}$$

$$\frac{3\sqrt[4]{8}}{4}$$

$$21) \frac{\sqrt[4]{5}}{4\sqrt[4]{27}}$$

$$\frac{\sqrt[4]{15}}{12}$$

$$22) \frac{\sqrt[3]{10}}{\sqrt[3]{32}}$$

$$\frac{\sqrt[3]{20}}{4}$$

$$23) \frac{-5 + 5\sqrt[4]{5}}{3\sqrt[4]{6}}$$

$$\frac{-5\sqrt[4]{216} + 5\sqrt[4]{1080}}{18}$$

$$24) \frac{3 + \sqrt[3]{3}}{\sqrt[3]{9}}$$

$$\frac{3\sqrt[3]{3} + \sqrt[3]{9}}{3}$$

$$25) \frac{-2x + \sqrt[3]{-5x^4y^3}}{3\sqrt[3]{15x^3y}}$$

$$\frac{-2\sqrt[3]{225y^2} - 5y\sqrt[3]{9y^2x}}{45y}$$

$$26) \frac{3 - \sqrt[4]{5k^2}}{\sqrt[4]{3k^3}}$$

$$\frac{3\sqrt[4]{27k} - \sqrt[4]{135k^3}}{3k}$$