

Math 2 Unit 3.3 Example Divide Radicals

Simplify.

1) $\frac{\sqrt{8}}{\sqrt{9}}$

2) $\frac{\sqrt{15}}{\sqrt{4}}$

3) $\frac{3\sqrt{2}}{2\sqrt{9}}$

4) $\frac{5\sqrt{10}}{3\sqrt{5}}$

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

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

7) $\frac{4 + 3\sqrt{3}}{4\sqrt{19}}$

8) $\frac{5 - 4\sqrt{5}}{4\sqrt{10}}$

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

10) $\frac{5r^4}{5\sqrt{5r^3}}$

11) $\frac{4 - 3\sqrt{3r^4}}{5\sqrt{18r^4}}$

12) $\frac{3 - 2\sqrt{2n^2}}{3\sqrt{17n}}$

13)
$$\frac{4 - 5\sqrt{2b^2}}{3\sqrt{11b}}$$

14)
$$\frac{5\sqrt{5n^3} - 4\sqrt{5n}}{5\sqrt{11n^3}}$$

15)
$$\frac{5\sqrt[4]{2xy}}{4\sqrt[4]{64xy^2}}$$

16)
$$-\frac{1}{4\sqrt[3]{16a}}$$

17)
$$\frac{2\sqrt[3]{2a^3b^4}}{4\sqrt[3]{9a^4b^4}}$$

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

19)
$$\frac{2\sqrt[5]{4r^4}}{2\sqrt[5]{625r^4}}$$

20)
$$\frac{3\sqrt[3]{2n^3} + 2\sqrt[3]{5n^4}}{3\sqrt[3]{16n^4}}$$

21)
$$\frac{4\sqrt[4]{3b} + 5\sqrt[4]{5b^3}}{4\sqrt[4]{11b^2}}$$

22)
$$\frac{5a^3 - 3\sqrt[3]{a}}{2\sqrt[3]{-20a^4}}$$

23)
$$\frac{-2 - 5\sqrt[4]{x^3}}{2\sqrt[4]{20x}}$$

24)
$$\frac{-1 + 5\sqrt[5]{2x^3}}{2\sqrt[5]{-6x^2}}$$

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Simplify.

1) $\frac{\sqrt{8}}{\sqrt{9}}$

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

2) $\frac{\sqrt{15}}{\sqrt{4}}$

$$\frac{\sqrt{15}}{2}$$

3) $\frac{3\sqrt{2}}{2\sqrt{9}}$

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

4) $\frac{5\sqrt{10}}{3\sqrt{5}}$

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

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

$$\frac{5\sqrt{39} + 5\sqrt{13}}{26}$$

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

$$\frac{-2\sqrt{7} - 5\sqrt{35}}{35}$$

7) $\frac{4 + 3\sqrt{3}}{4\sqrt{19}}$

$$\frac{4\sqrt{19} + 3\sqrt{57}}{76}$$

8) $\frac{5 - 4\sqrt{5}}{4\sqrt{10}}$

$$\frac{\sqrt{10} - 4\sqrt{2}}{8}$$

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

$$\frac{3\sqrt{2}}{4a^2}$$

10) $\frac{5r^4}{5\sqrt{5r^3}}$

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

11) $\frac{4 - 3\sqrt{3r^4}}{5\sqrt{18r^4}}$

$$\frac{4\sqrt{2} - 3r^2\sqrt{6}}{30r^2}$$

12) $\frac{3 - 2\sqrt{2n^2}}{3\sqrt{17n}}$

$$\frac{3\sqrt{17n} - 2n\sqrt{34n}}{51n}$$

$$13) \frac{4 - 5\sqrt{2b^2}}{3\sqrt{11b}}$$

$$\frac{4\sqrt{11b} - 5b\sqrt{22b}}{33b}$$

$$14) \frac{5\sqrt{5n^3} - 4\sqrt{5n}}{5\sqrt{11n^3}}$$

$$\frac{5n\sqrt{55} - 4\sqrt{55}}{55n}$$

$$15) \frac{5\sqrt[4]{2xy}}{4\sqrt[4]{64xy^2}}$$

$$\frac{5\sqrt[4]{8y^3}}{16y}$$

$$16) -\frac{1}{4\sqrt[3]{16a}}$$

$$-\frac{\sqrt[3]{4a^2}}{16a}$$

$$17) \frac{2\sqrt[3]{2a^3b^4}}{4\sqrt[3]{9a^4b^4}}$$

$$\frac{\sqrt[3]{6a^2}}{6a}$$

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

$$\frac{4\sqrt[3]{9n}}{15}$$

$$19) \frac{2\sqrt[5]{4r^4}}{2\sqrt[5]{625r^4}}$$

$$\frac{\sqrt[5]{20}}{5}$$

$$20) \frac{3\sqrt[3]{2n^3} + 2\sqrt[3]{5n^4}}{3\sqrt[3]{16n^4}}$$

$$\frac{3\sqrt[3]{n^2} + n\sqrt[3]{20}}{6n}$$

$$21) \frac{4\sqrt[4]{3b} + 5\sqrt[4]{5b^3}}{4\sqrt[4]{11b^2}}$$

$$\frac{4\sqrt[4]{3993b^3} + 5b\sqrt[4]{6655b}}{44b}$$

$$22) \frac{5a^3 - 3\sqrt[3]{a}}{2\sqrt[3]{-20a^4}}$$

$$\frac{-5a^2\sqrt[3]{50a^2} + 3\sqrt[3]{50}}{20a}$$

$$23) \frac{-2 - 5\sqrt[4]{x^3}}{2\sqrt[4]{20x}}$$

$$\frac{-2\sqrt[4]{500x^3} - 5x\sqrt[4]{500x^2}}{20x}$$

$$24) \frac{-1 + 5\sqrt[5]{2x^3}}{2\sqrt[5]{-6x^2}}$$

$$\frac{\sqrt[5]{1296x^3} - 10x\sqrt[5]{81x}}{12x}$$