

## [HW] Dividing, Adding radicals

Date \_\_\_\_\_ Period \_\_\_\_\_

**Simplify.**

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

2)  $\frac{\sqrt{25}}{\sqrt{4}}$

3)  $\frac{3\sqrt{5}}{3\sqrt{45}}$

4)  $\frac{\sqrt{8}}{2\sqrt{36}}$

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

6)  $\frac{\sqrt[5]{8}}{\sqrt[5]{6250}}$

7)  $\frac{4\sqrt{3}}{\sqrt{16}}$

8)  $\frac{4\sqrt[4]{8}}{\sqrt[4]{625}}$

9)  $2\sqrt[3]{4} - \sqrt[3]{5} + 2\sqrt[3]{5}$

10)  $3\sqrt{6} + 2\sqrt{6} - \sqrt{5}$

$$11) 3\sqrt{2} + 2\sqrt{18} - 3\sqrt{24}$$

$$12) -3\sqrt[3]{3} - \sqrt[3]{3} + 3\sqrt[3]{24}$$

$$13) -3\sqrt[3]{6} + 2\sqrt[3]{48} - \sqrt[3]{-6}$$

$$14) -2\sqrt{2} - \sqrt{45} + 2\sqrt{45}$$

$$15) 3\sqrt{8} + 3\sqrt{5} + 3\sqrt{20}$$

$$16) -3\sqrt{2} + 2\sqrt{27} + 3\sqrt{3}$$

$$17) 2\sqrt{24} - 2\sqrt{54} + 3\sqrt{5}$$

$$18) 2\sqrt{20} - 2\sqrt{27} - 2\sqrt{3}$$

$$19) -2\sqrt{2}(\sqrt{6} - 4\sqrt{10})$$

$$20) -4\sqrt{5}(4\sqrt{3} + 3)$$

$$21) -5\sqrt{15}(4 + \sqrt{10})$$

$$22) 5\sqrt{2}(5 + \sqrt{2})$$

$$23) (7\sqrt{3} - 7\sqrt{2m})(5\sqrt{3m} + 7\sqrt{2})$$

$$24) (5\sqrt{7p} - \sqrt{6})(3\sqrt{7p} + 7\sqrt{6})$$

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Date \_\_\_\_\_ Period \_\_\_\_\_

**Simplify.**

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

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

2)  $\frac{\sqrt{25}}{\sqrt{4}}$

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

3)  $\frac{3\sqrt{5}}{3\sqrt{45}}$

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

4)  $\frac{\sqrt{8}}{2\sqrt{36}}$

$$\frac{\sqrt{2}}{6}$$

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

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

6)  $\frac{\sqrt[5]{8}}{\sqrt[5]{6250}}$

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

7)  $\frac{4\sqrt{3}}{\sqrt{16}}$

$$\sqrt{3}$$

8)  $\frac{4\sqrt[4]{8}}{\sqrt[4]{625}}$

$$\frac{4\sqrt[4]{8}}{5}$$

9)  $2\sqrt[3]{4} - \sqrt[3]{5} + 2\sqrt[3]{5}$

$$2\sqrt[3]{4} + \sqrt[3]{5}$$

10)  $3\sqrt{6} + 2\sqrt{6} - \sqrt{5}$

$$5\sqrt{6} - \sqrt{5}$$

$$11) 3\sqrt{2} + 2\sqrt{18} - 3\sqrt{24}$$
$$9\sqrt{2} - 6\sqrt{6}$$

$$12) -3\sqrt[3]{3} - \sqrt[3]{3} + 3\sqrt[3]{24}$$
$$2\sqrt[3]{3}$$

$$13) -3\sqrt[3]{6} + 2\sqrt[3]{48} - \sqrt[3]{-6}$$
$$2\sqrt[3]{6}$$

$$14) -2\sqrt{2} - \sqrt{45} + 2\sqrt{45}$$
$$-2\sqrt{2} + 3\sqrt{5}$$

$$15) 3\sqrt{8} + 3\sqrt{5} + 3\sqrt{20}$$
$$6\sqrt{2} + 9\sqrt{5}$$

$$16) -3\sqrt{2} + 2\sqrt{27} + 3\sqrt{3}$$
$$-3\sqrt{2} + 9\sqrt{3}$$

$$17) 2\sqrt{24} - 2\sqrt{54} + 3\sqrt{5}$$
$$-2\sqrt{6} + 3\sqrt{5}$$

$$18) 2\sqrt{20} - 2\sqrt{27} - 2\sqrt{3}$$
$$4\sqrt{5} - 8\sqrt{3}$$

$$19) -2\sqrt{2}(\sqrt{6} - 4\sqrt{10})$$
$$-4\sqrt{3} + 16\sqrt{5}$$

$$20) -4\sqrt{5}(4\sqrt{3} + 3)$$
$$-16\sqrt{15} - 12\sqrt{5}$$

$$21) -5\sqrt{15}(4 + \sqrt{10})$$
$$-20\sqrt{15} - 25\sqrt{6}$$

$$22) 5\sqrt{2}(5 + \sqrt{2})$$
$$25\sqrt{2} + 10$$

$$23) (7\sqrt{3} - 7\sqrt{2m})(5\sqrt{3m} + 7\sqrt{2})$$
$$7\sqrt{m} + 49\sqrt{6} - 35m\sqrt{6}$$

$$24) (5\sqrt{7p} - \sqrt{6})(3\sqrt{7p} + 7\sqrt{6})$$
$$105p + 32\sqrt{42p} - 42$$