

# Multiplying and Dividing Square Roots

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

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**Simplify.**

1)  $\sqrt{2} \cdot \sqrt{5}$

2)  $-\sqrt{6} \cdot 4\sqrt{20}$

3)  $-4\sqrt{3} \cdot \sqrt{18}$

4)  $4\sqrt{30} \cdot \sqrt{6}$

5)  $\sqrt{2} \cdot \sqrt{12}$

6)  $\sqrt{2} \cdot -4\sqrt{6}$

7)  $2\sqrt{12} \cdot 2\sqrt{3}$

8)  $4\sqrt{2} \cdot 5\sqrt{3}$

9)  $2\sqrt{12} \cdot 4\sqrt{15}$

10)  $-3\sqrt{15} \cdot 5\sqrt{6}$

11)  $\frac{6\sqrt{6}}{\sqrt{4}}$

12)  $\frac{5\sqrt{10}}{6\sqrt{2}}$

13)  $\frac{4\sqrt{6}}{\sqrt{2}}$

14)  $\frac{3\sqrt{30}}{6\sqrt{216}}$

15)  $\frac{3\sqrt{36}}{6\sqrt{4}}$

16)  $\frac{6\sqrt{36}}{4\sqrt{4}}$

17)  $\frac{3\sqrt{6}}{\sqrt{5}}$

18)  $\frac{5\sqrt{5}}{4\sqrt{2}}$

19)  $-\frac{4}{3\sqrt{5}}$

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

21)  $\frac{4\sqrt{3}}{3\sqrt{2}}$

22)  $\frac{6\sqrt{6}}{2\sqrt{5}}$

23)  $\frac{6\sqrt{3}}{3\sqrt{6}}$

24)  $\frac{3\sqrt{6}}{6\sqrt{5}}$

## Multiplying and Dividing Square Roots

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**Simplify.**

1)  $\sqrt{2} \cdot \sqrt{5}$   
 $\sqrt{10}$

2)  $-\sqrt{6} \cdot 4\sqrt{20}$   
 $-8\sqrt{30}$

3)  $-4\sqrt{3} \cdot \sqrt{18}$   
 $-12\sqrt{6}$

4)  $4\sqrt{30} \cdot \sqrt{6}$   
 $24\sqrt{5}$

5)  $\sqrt{2} \cdot \sqrt{12}$   
 $2\sqrt{6}$

6)  $\sqrt{2} \cdot -4\sqrt{6}$   
 $-8\sqrt{3}$

7)  $2\sqrt{12} \cdot 2\sqrt{3}$   
 $24$

8)  $4\sqrt{2} \cdot 5\sqrt{3}$   
 $20\sqrt{6}$

9)  $2\sqrt{12} \cdot 4\sqrt{15}$   
 $48\sqrt{5}$

10)  $-3\sqrt{15} \cdot 5\sqrt{6}$   
 $-45\sqrt{10}$

11)  $\frac{6\sqrt{6}}{\sqrt{4}}$   
 $3\sqrt{6}$

12)  $\frac{5\sqrt{10}}{6\sqrt{2}}$   
 $\frac{5\sqrt{5}}{6}$

$$13) \frac{4\sqrt{6}}{\sqrt{2}}$$

$$4\sqrt{3}$$

$$14) \frac{3\sqrt{30}}{6\sqrt{216}}$$

$$\frac{\sqrt{5}}{12}$$

$$15) \frac{3\sqrt{36}}{6\sqrt{4}}$$

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

$$16) \frac{6\sqrt{36}}{4\sqrt{4}}$$

$$\frac{9}{2}$$

$$17) \frac{3\sqrt{6}}{\sqrt{5}}$$

$$\frac{3\sqrt{30}}{5}$$

$$18) \frac{5\sqrt{5}}{4\sqrt{2}}$$

$$\frac{5\sqrt{10}}{8}$$

$$19) -\frac{4}{3\sqrt{5}}$$

$$-\frac{4\sqrt{5}}{15}$$

$$20) \frac{2\sqrt{5}}{\sqrt{2}}$$

$$\sqrt{10}$$

$$21) \frac{4\sqrt{3}}{3\sqrt{2}}$$

$$\frac{2\sqrt{6}}{3}$$

$$22) \frac{6\sqrt{6}}{2\sqrt{5}}$$

$$\frac{3\sqrt{30}}{5}$$

$$23) \frac{6\sqrt{3}}{3\sqrt{6}}$$

$$\sqrt{2}$$

$$24) \frac{3\sqrt{6}}{6\sqrt{5}}$$

$$\frac{\sqrt{30}}{10}$$