

HW#6

Simplify.

1) $\sqrt{6} \cdot \sqrt{6}$

2) $\sqrt{15} \cdot \sqrt{3}$

3) $\sqrt{10p} \cdot \sqrt{2p}$

4) $\sqrt{10n^3} \cdot \sqrt{6n^2}$

5) $\sqrt{6}(2 + \sqrt{3})$

6) $3\sqrt{6}(5\sqrt{2} - 3\sqrt{5})$

7) $(-5 + \sqrt{6})(-2 + \sqrt{6})$

8) $(\sqrt{2} + \sqrt{5})(\sqrt{2} + \sqrt{4})$

$$9) (5 - 4\sqrt{5})(2 - 3\sqrt{5})$$

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

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

$$12) \frac{5\sqrt{3}}{5\sqrt{6}}$$

$$13) \frac{4}{7 - \sqrt{6}}$$

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

$$15) (-3\sqrt{2} - 4\sqrt{3r})(-\sqrt{2r} + 2\sqrt{3})$$

$$16) \frac{\sqrt[4]{16n^2}}{\sqrt[4]{500n^4}}$$

$$17) \frac{\sqrt[6]{20}}{\sqrt[6]{4096}}$$

$$18) \frac{2n}{3\sqrt[4]{27mn^3}}$$

Answers to HW#6

1) 6

2) $3\sqrt{5}$

3) $2p\sqrt{5}$

4) $2n^2\sqrt{15n}$

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

6) $30\sqrt{3} - 9\sqrt{30}$

7) $16 - 7\sqrt{6}$

8) $2 + 2\sqrt{2} + \sqrt{10} + 2\sqrt{5}$

9) $70 - 23\sqrt{5}$

10) $\sqrt{3}$

11) $\frac{2\sqrt{5}}{15}$

12) $\frac{\sqrt{2}}{2}$

13) $\frac{28 + 4\sqrt{6}}{43}$

14) $\frac{10 + 25\sqrt{3}}{71}$

15) $-18\sqrt{r} - 6\sqrt{6} + 4r\sqrt{6}$

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

17) $\frac{\sqrt[6]{20}}{4}$

18) $\frac{2\sqrt[4]{3m^3n}}{9m}$