

Radical operations and Rational and Irrational Numbers

For each of the following determine if it is a rational or an irrational number

1) 5.6

2) $\frac{1}{3}$

3) $\frac{1}{4}$

4) -9

5) 7.43233

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

7) $\frac{2}{3} \cdot 9$

8) $\frac{2}{5} + 0.444$

9) $\sqrt{15} + \frac{1}{3}$

10) $\sqrt{7} + 7$

Simplify.

11) $\sqrt{12} + \sqrt{27}$

12) $\sqrt{45} + \sqrt{5}$

$$13) -\sqrt{45} - 3\sqrt{5}$$

$$14) 2\sqrt{6} - 3\sqrt{54}$$

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

$$16) \sqrt{2} + \sqrt{24} + \sqrt{2}$$

$$17) \sqrt{35k^3} \cdot \sqrt{30k^2}$$

$$18) \sqrt{35m^2} \cdot \sqrt{42m^3}$$

$$19) 5\sqrt{9v} \cdot 5\sqrt{4v}$$

$$20) 6\sqrt{7r^3} \cdot -3\sqrt{42r^2}$$