

Rationalizing Denominators: No Variables

Simplify.

1) $\frac{8\sqrt{9}}{10\sqrt{5}}$

2) $\frac{2\sqrt{8}}{\sqrt{10}}$

3) $\frac{3\sqrt{64}}{4\sqrt{80}}$

4) $\frac{8\sqrt{63}}{\sqrt{90}}$

5) $\frac{5\sqrt{15}}{\sqrt{30}}$

6) $\frac{2\sqrt{4}}{5\sqrt{3}}$

7) $\frac{4}{-1 - \sqrt{2}}$

8) $\frac{9}{10 + 7\sqrt{10}}$

9) $\frac{8}{7 + \sqrt{3}}$

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

11) $\frac{7}{5\sqrt{6} - 9\sqrt{7}}$

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

13) $\frac{3 - \sqrt{7}}{\sqrt{24}}$

14) $\frac{9\sqrt{2} + 8}{\sqrt{14}}$

15) $\frac{-9 - \sqrt{3}}{7\sqrt{40}}$

16) $\frac{6 + \sqrt{7}}{\sqrt{24}}$

17) $\frac{6 + \sqrt{3}}{10\sqrt{6} + \sqrt{5}}$

18) $\frac{6 - \sqrt{10}}{6\sqrt{7} + 9}$

19) $\frac{4 + 6\sqrt{7}}{2 - 4\sqrt{2}}$

20) $\frac{5 - \sqrt{2}}{4\sqrt{7} - 5\sqrt{5}}$

Answers to Rationalizing Denominators: No Variables

$$1) \frac{12\sqrt{5}}{25}$$

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

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

$$4) \frac{4\sqrt{70}}{5}$$

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

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

$$7) 4 - 4\sqrt{2}$$

$$8) \frac{-30 + 21\sqrt{10}}{130}$$

$$9) \frac{28 - 4\sqrt{3}}{23}$$

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

$$11) \frac{-35\sqrt{6} - 63\sqrt{7}}{417}$$

$$12) \frac{-7\sqrt{5} - 35\sqrt{2}}{45}$$

$$13) \frac{3\sqrt{6} - \sqrt{42}}{12}$$

$$14) \frac{9\sqrt{7} + 4\sqrt{14}}{7}$$

$$15) \frac{-9\sqrt{10} - \sqrt{30}}{140}$$

$$16) \frac{6\sqrt{6} + \sqrt{42}}{12}$$

$$17) \frac{60\sqrt{6} - 6\sqrt{5} + 30\sqrt{2} - \sqrt{15}}{595}$$

$$18) \frac{12\sqrt{7} - 18 - 2\sqrt{70} + 3\sqrt{10}}{57}$$

$$19) \frac{-2 - 4\sqrt{2} - 3\sqrt{7} - 6\sqrt{14}}{7}$$

$$20) \frac{-20\sqrt{7} - 25\sqrt{5} + 4\sqrt{14} + 5\sqrt{10}}{13}$$