Name:

Date:

Simplifying Radical Expressions Involving Fractions

Simplify.

1) $\frac{5\sqrt{3} - 3\sqrt{2}}{3\sqrt{2} - 2\sqrt{3}}$

2) $\frac{\sqrt{7} + \sqrt{5}}{\sqrt{5} + \sqrt{2}}$

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

4) $\frac{\sqrt{31\,a^5\,b^3}}{\sqrt{2\,a\,b^2}}$

5) $\frac{1 + \sqrt{2}}{3 + \sqrt{5}}$

6) $\frac{8\sqrt{3}}{\sqrt{k}}$

7) $\frac{2\sqrt{5\,r}}{\sqrt{m^3}}$

8) $\frac{\sqrt{7} - \sqrt{3}}{\sqrt{3} - \sqrt{7}}$

9) $\frac{\sqrt{a}}{\sqrt{a} + \sqrt{b}}$

10) $\frac{6\sqrt{45\,x^3}}{3\sqrt{5\,x}}$

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1) $\frac{5\sqrt{3}-3\sqrt{2}}{3\sqrt{2}-2\sqrt{3}}$

$\frac{3\sqrt{6}+4}{2}$

2) $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{5}+\sqrt{2}}$

$\frac{\sqrt{35}-\sqrt{14}+5\sqrt{10}}{3}$

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

$\frac{12+2\sqrt{3}+6\sqrt{5}+\sqrt{15}}{33}$

4) $\frac{\sqrt{31\,a^5\,b^3}}{\sqrt{2\,a\,b^2}}$

$4\,a^2\sqrt{b}$

5) $\frac{1+\sqrt{2}}{3+\sqrt{5}}$

$\frac{3-\sqrt{5}+3\sqrt{2}-\sqrt{10}}{4}$

6) $\frac{8\sqrt{3}}{\sqrt{k}}$

$\frac{8\sqrt{3\,k}}{k}$

7) $\frac{2\sqrt{5\,r}}{\sqrt{m^3}}$

$\frac{2\sqrt{5\,m\,r}}{m^2}$

8) $\frac{\sqrt{7}-\sqrt{3}}{\sqrt{3}-\sqrt{7}}$

-1

9) $\frac{\sqrt{a}}{\sqrt{a}+\sqrt{b}}$

$\frac{a-\sqrt{a\,b}}{a-b}$

10) $\frac{6\sqrt{45\,x^3}}{3\sqrt{5\,x}}$

$6\,x$