19.5 More on Division of Radical Expressions

Rationalizing the Denominator: the procedure for finding an equivalent expression in which the denominator no longer contains a radical

Ex. Rationalize the denominator.

(a) $\dfrac{5}{\sqrt{12}}$

(b) $\sqrt{\dfrac{11}{18}}$

(c) $\dfrac{\sqrt[3]{10}}{\sqrt[3]{20}}$

(d) $\dfrac{14a^2}{3\sqrt[3]{7a^2}}$

Pairs of radical terms, like $\sqrt{a}+\sqrt{b}$ and $\sqrt{a}-\sqrt{b}$, are called **conjugates**.

Ex. Rationalize each denominator.

(a) $\dfrac{3}{\sqrt{5}+2}$

(b) $\dfrac{34\sqrt{5}}{2\sqrt{5}-\sqrt{3}}$

(c) $\dfrac{5+2\sqrt{b}}{4+3\sqrt{b}}$

(d) $\dfrac{5+\sqrt{x}}{8-\sqrt{x}}$