Intermediate Algebra

7-2

(Day 3)

Properties of Radicals

Simplify.

No addition or subtraction no conjugate pair

need conjugate pair

*1) $\dfrac{3\sqrt{7}}{\sqrt{7}} \cdot \sqrt{7}$

$\dfrac{3\sqrt{7}}{\sqrt{49}}$

$= \boxed{\dfrac{3\sqrt{7}}{7}}$

*2) $\dfrac{3}{(\sqrt{5}+\sqrt{2})} \cdot \dfrac{(\sqrt{5}-\sqrt{2})}{(\sqrt{5}-\sqrt{2})}$

$\dfrac{3(\sqrt{5}-\sqrt{2})}{\sqrt{25}-\sqrt{4}}$

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

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

$= \boxed{\sqrt{5}-\sqrt{2}}$

*3) $\dfrac{(4\sqrt{x}-x)}{(5\sqrt{x}+2x)} \cdot \dfrac{(5\sqrt{x}-2x)}{(5\sqrt{x}-2x)}$

$\dfrac{20\sqrt{x^2}-8x\sqrt{x}-5x\sqrt{x}+2x^2}{25\sqrt{x^2}-4x^2}$

$\dfrac{20x-13x\sqrt{x}+2x^2}{25x-4x^2}$

Reduce all groups by x

$= \boxed{\dfrac{20-13\sqrt{x}+2x}{25-4x}}$

Assignment:
pg. 392
95-109 odd