Notes #4 ~ Sect. 11.1: Simplifying Radicals (Part 3: Division)

Division Property of Square Roots:

$$\sqrt{\frac{a}{b}} = \frac{\sqrt{a}}{\sqrt{b}}$$

Ex. 1 : Simplify each radical expression.

a) $\sqrt{\frac{13}{64}} =$

b) $\sqrt{\frac{49}{x^4}} =$

c) $\sqrt{\frac{144}{9}} =$

d) $\sqrt{\frac{25p^3}{q^2}} =$

e) $\sqrt{\frac{75}{16t^2}} =$

When the denominator is not a perfect square, it may be easier to divide first and then simplify.

Ex. 2 : Simplify each radical expression.

a) $\sqrt{\frac{120}{10}} =$

b) $\sqrt{\frac{90}{5}} =$

c) $\sqrt{\frac{48}{75}} =$

d) $\sqrt{\frac{75x^5}{48x}} =$

e) $\sqrt{\frac{27x^3}{3x}} =$