

MTH 28.5 LECTURE NOTES (Ojakian)

Topic 27: Simplify Radicals

OUTLINE

References: 8.1, 8.2

1. Two ways to Simplify Radical Expressions

- (a) Pull out groups.
- (b) Apply rule

2. Simplifying Radical Expressions

PROBLEM 1. (*Numerical Radical Expressions*)

Simplify the following:

- (a) $\sqrt{45}$ (*do by pulling out pairs*)
- (b) $\sqrt{1000}$ (*do using the rule*)
- (c) $\sqrt[3]{-54}$ (*do by pulling out triples*)
- (d) $\sqrt[3]{10000}$ (*do using the rule*)

PROBLEM 2. (*Examples with variables*)

Simplify the following.

- (a) $\sqrt{y^6}$
- (b) $\sqrt{x^7}$
- (c) $\sqrt[3]{x^6}$
- (d) $\sqrt[3]{x^7}$
- (e) $\sqrt{25x^7y^6}$
- (f) $\sqrt{\frac{18m^5n^6}{p^{12}q^4}}$
- (g) $\sqrt{\frac{24a^5b^6}{49a^{12}c^2}}$