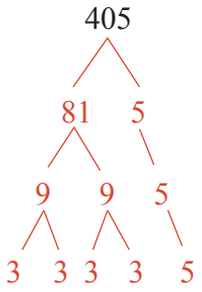
Unit 1: Radicals Lesson 1.1

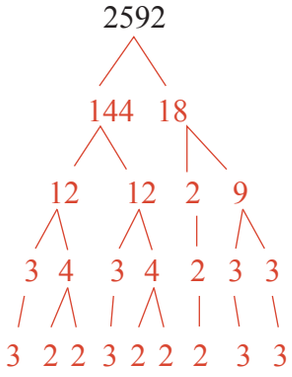
Coach's Corner – II

1. Determine the prime factors for the numbers below using the prime factorization tree method. Show all steps.

a.



b.



2. Express each of the following as a mixed radical in simplest form.

a. $\sqrt{72}$

$\sqrt{72}$
$= \sqrt{9 \times 8}$
$= \sqrt{9 \times 4 \times 2}$
$= \sqrt{3^2 \times 2^2 \times 2}$
$= 3 \times 2\sqrt{2}$
$= 6\sqrt{2}$

b. $\sqrt[3]{81}$

$\sqrt[3]{81}$
$= \sqrt[3]{3 \times 3 \times 3 \times 3}$
$= \sqrt[3]{3^3 \times 3}$
$= 3\sqrt[3]{3}$

3. Express each of the following as an entire radical.

a. $3\sqrt[3]{2}$

$3\sqrt[3]{2}$
$= \sqrt[3]{3^3 \times 2}$
$= \sqrt[3]{27 \times 2}$
$= \sqrt[3]{54}$

b. $2\sqrt{5}$

$2\sqrt{5}$
$= \sqrt{2^2 \times 5}$
$= \sqrt{4 \times 5}$
$= \sqrt{20}$

c. $4\sqrt{8}$

$4\sqrt{8}$
$= \sqrt{4^2 \times 8}$
$= \sqrt{16 \times 8}$
$= \sqrt{128}$

Please complete *Lesson 1.1 Game On!* located in *Workbook 1A* before proceeding to *Lesson 1.2*.