Math 32/101 **Name**_____

ALGEBRA REVIEW 1: ROOTS AND COMPLEX NUMBERS

A) Simplify each of the square root radicals:

$\sqrt{12}$ $\sqrt{20}$ $\sqrt{54}$ $\sqrt{98}$

$\sqrt{700}$ $\sqrt{128}$ $\sqrt{75}$ $\sqrt{44}$

B) Rationalize the denominators:

$\frac{1}{\sqrt{3}}$ $\frac{2}{\sqrt{5}}$ $\sqrt{\frac{2}{5}}$ $\frac{7}{\sqrt{8}}$

$\frac{2\sqrt{5}}{\sqrt{6}}$ $\frac{10}{\sqrt{12}}$ $\frac{9}{\sqrt{13}}$ $\frac{17}{\sqrt{10}}$

C) Solve for x:

$\frac{2}{3}x + 1 = 15$ $\frac{2}{\sqrt{3}}x = 12$ $\sqrt{5}x + 1 = 11$ $\frac{1}{\sqrt{8}}x = 6$

D) Simplify the expressions involved negative radicands:

$\sqrt{-4}$ $\sqrt{-49}$ $\sqrt{-8}$ $\sqrt{-120}$

$\sqrt{-104}$ $\sqrt{-121}$ $\sqrt{-200}$ $\sqrt{-72}$

$\sqrt{-81}$ $\sqrt{-162}$ $\sqrt{-25}$ $\sqrt{-50}$

$\sqrt{-11}$ $\sqrt{-22}$ $\sqrt{-99}$ $\sqrt{-1000}$