Unit 6.1 Introduction to Roots and Radicals and Simplifying Radical Expressions

1. Simplify the radical and write it in its simplest form

a. $\sqrt{\frac{49}{100}} =$ _____

b. $\sqrt{\frac{20}{45}} =$ _____

c. $\sqrt{\frac{112}{567}} =$ _____

d. $\sqrt{\frac{3}{108}} =$ _____

e. $\frac{\sqrt{2}}{\sqrt{12}} =$ _____

f. $\frac{3\sqrt{3}}{12\sqrt{48}} =$ _____

2. Evaluate the following (if no solution write NaN)

a. $\sqrt[3]{-27} =$ _____

b. $-\sqrt[4]{256} =$ _____

c. $\sqrt[5]{-32} =$ _____

d. $\sqrt{-25} =$ _____

e. $-\sqrt[3]{125} =$ _____

f. $\sqrt[6]{-64} =$ _____

g. $\sqrt[3]{\frac{8}{125}} =$ _____

h. $\sqrt[5]{\frac{1}{32}} =$ _____

i. $\sqrt[4]{\frac{81}{1296}} =$ _____

k. $\sqrt[2]{\frac{4}{36}} =$ _____

l. $\sqrt{153} =$ _____

m. $\sqrt{576} =$ _____

o. $\sqrt{720} =$ _____

p. $\sqrt{7875} =$ _____

3. Approximate the value of the radical with a calculator

a. $\sqrt{3} =$ _____

b. $\sqrt{2} =$ _____