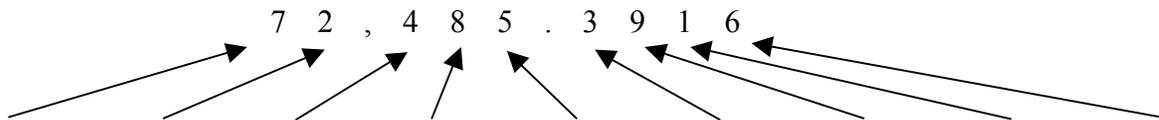# 1.5   Rational Approximations for Irrational Numbers Using a Calculator

State the place value for each digit.

7   2   ,   4   8   5   .   3   9   1   6

Class Notes – Use your calculator to find a rational approximation for each radical expression.

LP#1 – Round to the nearest tenth $\sqrt{20}$	$\sqrt{52}$	$\sqrt{93}$
LP#2 – Round to the nearest thousandth $\sqrt{14}$	$\sqrt{2}$	$\sqrt{46}$
LP#3 – Round to the nearest millionth $\sqrt{30}$	$\sqrt{125}$	$\sqrt{200}$

Review - Use your calculator to estimate each radical expression.

R#1 – Round to the nearest hundredth $\sqrt{58}$	$\sqrt{109}$	$\sqrt{40}$
R#2 – Round to the nearest tenth $\sqrt{32}$	$\sqrt{260}$	$\sqrt{10}$
R#3 – Round to the nearest thousandth $\sqrt{3}$	$\sqrt{145}$	$\sqrt{17}$

Lesson 1.5

Homework
Use your calculator to find a rational approximation for each radical expression. Round your approximations to the *nearest ten-thousandth*.

1) $\sqrt{13}$ **2)** $\sqrt{53}$ **3)** $\sqrt{300}$ **4)** $\sqrt{85}$ **5)** $\sqrt{41}$

6) $\sqrt{61}$ **7)** $\sqrt{182}$ **8)** $\sqrt{22}$ **9)** $\sqrt{111}$ **10)** $\sqrt{97}$

Estimate each radical expression to the *nearest hundredth*.

11) $\sqrt{525}$ **12)** $\sqrt{219}$ **13)** $\sqrt{19}$ **14)** $\sqrt{5}$ **15)** $\sqrt{405}$

16) $\sqrt{1250}$ **17)** $\sqrt{10}$ **18)** $\sqrt{60}$ **19)** $\sqrt{198}$ **20)** $\sqrt{740}$

21) Find a rational approximation for $\sqrt{62}$ to the nearest hundredth.

22) Find a rational approximation for $\sqrt{15}$ to the nearest ten

23) Find a rational approximation for $\sqrt{125}$ to the nearest tenth.

Synthesis

24) If the $\sqrt{16} = 4$ and $\sqrt{25} = 5$, then $\sqrt{16/25} = ?$

25) If the $\sqrt{81} = 9$ and $\sqrt{49} = 7$, then $\sqrt{81/49} = ?$

26) Evaluate $\sqrt{36/64} =$

27) Evaluate $\sqrt{9/100} =$

28) Evaluate $\sqrt{121/4} =$