

Unit 1 - Number Systems

© 2013 Kuta Software LLC. All rights reserved.

Date _____ Period _____

Are the following rational or irrational? How do you know?

1) $\sqrt{49}$

2) $\sqrt{90}$

3) $\sqrt{2}$

4) $\sqrt{144}$

5) $\sqrt{84}$

6) 0.58592

7) 0.22055

8) $\frac{30}{48}$

9) $\frac{6}{24}$

10) π

Find each square root.

11) $\sqrt{16}$

12) $\sqrt{121}$

Write each as a fraction.

13) $0.\overline{008}$

14) 0.01

15) 1.46

16) 8.6

Write each as a decimal.

17) $\frac{3}{8}$

18) $\frac{13}{4}$

Solve each equation.

19) $r^2 = 13$

20) $m^2 = 36$

What two whole numbers are these between? Knowing that, estimate the value to the nearest tenth and show your work.

21) $\sqrt{17}$

22) $\sqrt{8}$

23) $\sqrt{4}$

24) $\sqrt{149}$

25) $\sqrt{24}$

26) $\sqrt{14}$

27) $\sqrt{146}$

28) $\sqrt{21}$

29) $\sqrt{1}$

30) $\sqrt{11}$

Compare using < > or =.

31) $\frac{5}{4}$ $\frac{6}{5}$

32) $-\frac{4}{5}$ $-\frac{3}{4}$

33) -1.256 -1.12

34) 5.85 5.9

35) $-\frac{1}{7}$ -0.27

36) $-\frac{4}{5}$ -0.925

37) $\sqrt{15}$ $\sqrt{22}$

38) $\sqrt{8}$ π

Order the following sets of numbers and place on a number line.

39) -2.7, -3.6, $-\frac{9}{25}$, $-\frac{2}{7}$

40) 0.035, $\frac{11}{50}$, 0.275, $\frac{7}{25}$