

Homework #1 - Rational and Irrational Numbers

Date _____ 5K _____

State if the number is rational or irrational.

$$1) \sqrt{17} = 4.1231056$$

irrational

$$2) -\frac{8}{21} = -\overline{.380952}$$

rational

$$3) \pi = 3.14$$

irrational

$$4) \sqrt{16} = 4$$

rational

Write each as a fraction. Simplify the fraction if possible.

$$5) 0.75 = \frac{75}{100} = \frac{3}{4}$$

$$6) 4.465 = \frac{4465}{1000} = \frac{893}{200}$$

$$7) 0.5 = \frac{5}{10} = \frac{1}{2}$$

$$8) 8.2 = \frac{82}{10} = \frac{41}{5}$$

$$9) 5.988 = \frac{5988}{1000} = \frac{1497}{250}$$

$$10) 0.745 = \frac{745}{1000} = \frac{149}{200}$$

$$11) 1.121 = \frac{1121}{1000}$$

$$12) 0.84 = \frac{84}{100} = \frac{21}{25}$$

$$13) 0.2 = \frac{2}{10} = \frac{1}{5}$$

$$14) 0.94 = \frac{94}{100} = \frac{47}{50}$$

$$15) 0.091 = \frac{91}{1000}$$

$$16) 9.9 = \frac{99}{10}$$

Write each as a decimal. State the Period and Length of Period if it exists.

$$17) \frac{8}{25} = .32$$

Period =

Length = no

$$18) \frac{2}{3} = \overline{.6}$$

Period = 6

Length = 1

$$19) \frac{24}{25} = .96$$

$$20) \frac{20}{33} = .\overline{60}$$

Period = 60

Length = 2

$$21) \frac{31}{33} = .\overline{93}$$

Period = 93

Length = 2

$$22) \frac{46}{99} = .\overline{46}$$

Period = 46

Length = 2

$$23) \frac{1}{5} = .2$$

$$24) \frac{23}{25} = .92$$

Period = 92

Length = 2

$$25) \frac{8}{3333} = .\overline{0024}$$

Period = 0024

Length = 4

$$26) \frac{1}{125} = .008$$

Period = 008

Length = 3

$$27) \frac{309}{500} = .618$$

$$28) \frac{616}{999} = .\overline{616}$$

Period = 616

Length = 3