

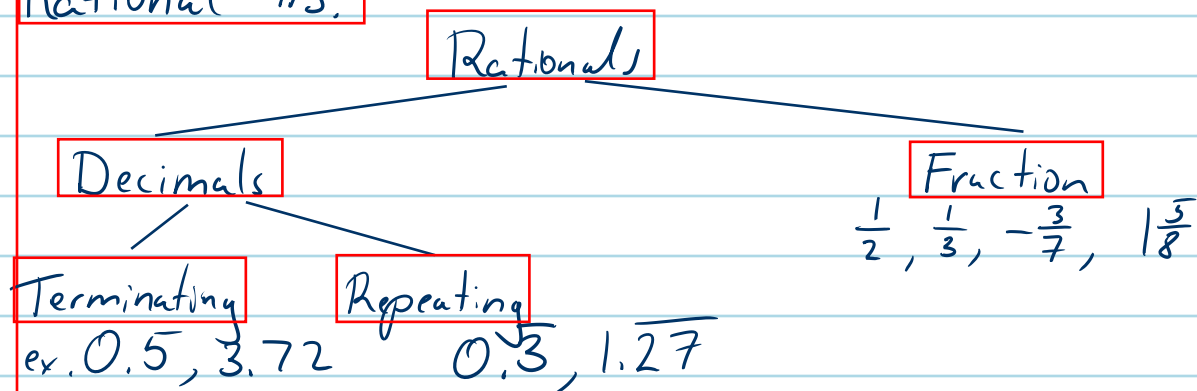
# Unit 2 Day 1

## 2-1 Converting Rationals

Feb. 15th, 2016

**Integers** are whole #s that can be +, -, or 0.  
ex. -5, 0, 17, 8312

Together, integers and fractions form the set of **Rational #s.**



Every rational # can be written as either a decimal or a fraction. ex.  $0.5 = \frac{1}{2}$ ,  $0.\overline{3} = \frac{1}{3}$

Decimals have implied denominators. ex.  $0.25 = \frac{25}{100} = \frac{1}{4}$

Complete the following

1)  $\frac{1}{8} = \frac{5}{40}$

2)  $\frac{2}{5} = \frac{16}{40}$

3)  $\frac{3}{4} = \frac{18}{24}$

4)  $\frac{8}{13} = \frac{24}{39}$

5)  $\frac{9}{11} = \frac{54}{66}$

6)  $\frac{7}{12} = \frac{35}{60}$

Reduce

7)  $\frac{9}{12} = \frac{3}{4}$

8)  $\frac{27}{6} = \frac{9}{2}$

9)  $\frac{13}{52} = \frac{1}{4}$

## Decimals to Memorize!

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

$$11) \frac{1}{3} = 0.\overline{3}$$

$$12) \frac{2}{3} = 0.\overline{6}$$

$$13) \frac{1}{4} = 0.25$$

$$14) \frac{3}{4} = 0.75$$

$$15) \frac{1}{5} = 0.2$$

$$16) \frac{2}{5} = 0.4$$

$$17) \frac{3}{5} = 0.6$$

$$18) \frac{4}{5} = 0.8$$

$$19) \frac{1}{8} = 0.125$$

$\swarrow \frac{1}{2} \text{ of } \frac{1}{4}$

$$20) \frac{3}{8} = 0.375$$

$$21) \frac{5}{8} = 0.625$$

$\swarrow \frac{1}{2} + \frac{1}{8} = 0.5 + 0.125$

$$22) \frac{7}{8} = 0.875 \quad (0.5 + 0.375!)$$

Convert the following to Fractions

$$23) 0.15 = \frac{15}{100} = \frac{3}{20}$$

$$24) 0.625 = \frac{5}{8}$$

$$25) 1.25 = 1\frac{1}{4} = \frac{5}{4}$$

$$26) 3.125 = 3\frac{1}{8}$$

$$= \frac{25}{8}$$

$$27) 0.\overline{6} = \frac{2}{3}$$

$$28) 1.\overline{3} = 1\frac{1}{3} = \frac{4}{3}$$

Rule of 9: For repeating decimals. The denominator has as many 9's as repeating digits

$$\text{ex. } 0.\overline{5} = \frac{5}{9}$$

$$0.\overline{3} = \frac{3}{9} = \frac{1}{3}$$

$$0.\overline{12} = \frac{12}{99} \\ = \frac{4}{33}$$

$$29) 0.\overline{8} = \frac{8}{9}$$

$$30) 0.\overline{27} = \frac{27}{99}$$

$$31) 0.\overline{018} = \frac{18}{999}$$

$$= \frac{3}{11}$$

$$= \frac{2}{111}$$

$$32) 3.\overline{7}$$

$$= 3\frac{7}{9}$$

$$= \frac{34}{9}$$

$$33) 2.\overline{06}$$

$$= 2\frac{6}{99}$$

$$= 2\frac{2}{33}$$

$$= \frac{68}{33}$$

Practice 2-1 odds