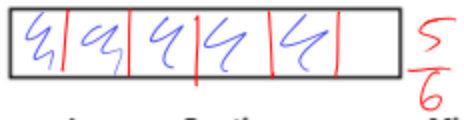
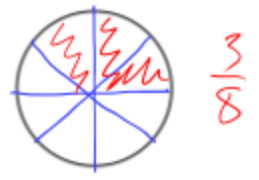


Rational Numbers: Any number that be written as a fraction (or) a repeating/terminating decimal

For example: $\frac{3}{7}$, $-\frac{15}{8}$, $2\frac{1}{3}$, 0.237 , $3.54\bar{9}$, $1.573291851...$

- Denominator:**
- bottom of fraction
 - total number of pieces in the whole



- Numerator:**
- top of fraction
 - number of pieces you have (colored in)

- Simple Fractions:**
- numerator (top) is smaller than denominator (bottom)

$\frac{3}{8}, \frac{5}{6}, \frac{1}{2}$

- Improper Fractions:**
- numerator is bigger than denominator

$\frac{8}{3}, \frac{6}{5}, \frac{7}{2}$

- Mixed Fractions:**
- Integer next to Simple fraction

$3\frac{1}{2} = 3 + \frac{1}{2}$
 $-4\frac{2}{3} = -(4 + \frac{2}{3}) = -4 - \frac{2}{3}$

Fractions to Decimals:

$\frac{1}{4} = 1 \div 4 = 0.25$ $\frac{8}{3} = 8 \div 3 = 2.666... = 2.\bar{6}$ $2\frac{3}{7} = \frac{2 \cdot 7 + 3}{7} = \frac{17}{7} = \frac{3}{7} + 2 = 2.428571428571 = 2.\overline{428571}$

Terminating Decimals to Fractions:

$1.55 = \frac{155}{100}$
 ↑
 2 zeros
 move back 2 times

$0.3147 = \frac{3147}{10000}$
 ↑
 4 zeros

$23.765 = \frac{23765}{1000}$
 ↑
 3 zeros
 thousand

Repeating decimals to fractions is possible, but a bit more complicated...

$0.\bar{2} = \frac{2}{9} \Rightarrow 0.\overline{23} = \frac{23}{99} \Rightarrow 0.\overline{234} = \frac{234}{999}$

