

HW: 2-2 MathXL for School Additional Practice (on Google Classroom)

**Warm up:**

Write the following numbers as fractions.

$$1) 2.354 = 2 \frac{354}{1000} = 2 \frac{177}{500}$$

$$2) 0.52\overline{52} = \frac{52}{99}$$

$$3) 7 = \frac{7}{1}$$

$$\sqrt{49} = 7$$

**square root** - a number that produces a specified quantity when multiplied by itself

$$\sqrt{49} = 7$$

$$\sqrt{100} = 10$$

**perfect square** - a # w/ an integer square root

1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144

$$\sqrt{3} = 1.732050808|$$
$$\sqrt{2} = 1.414213562|$$

$$\sqrt{9} = 3$$

two square roots of 9  
3 and -3

$$\begin{array}{l} -\sqrt{9} \\ +\sqrt{9} \end{array}$$

non-terminating decimal -

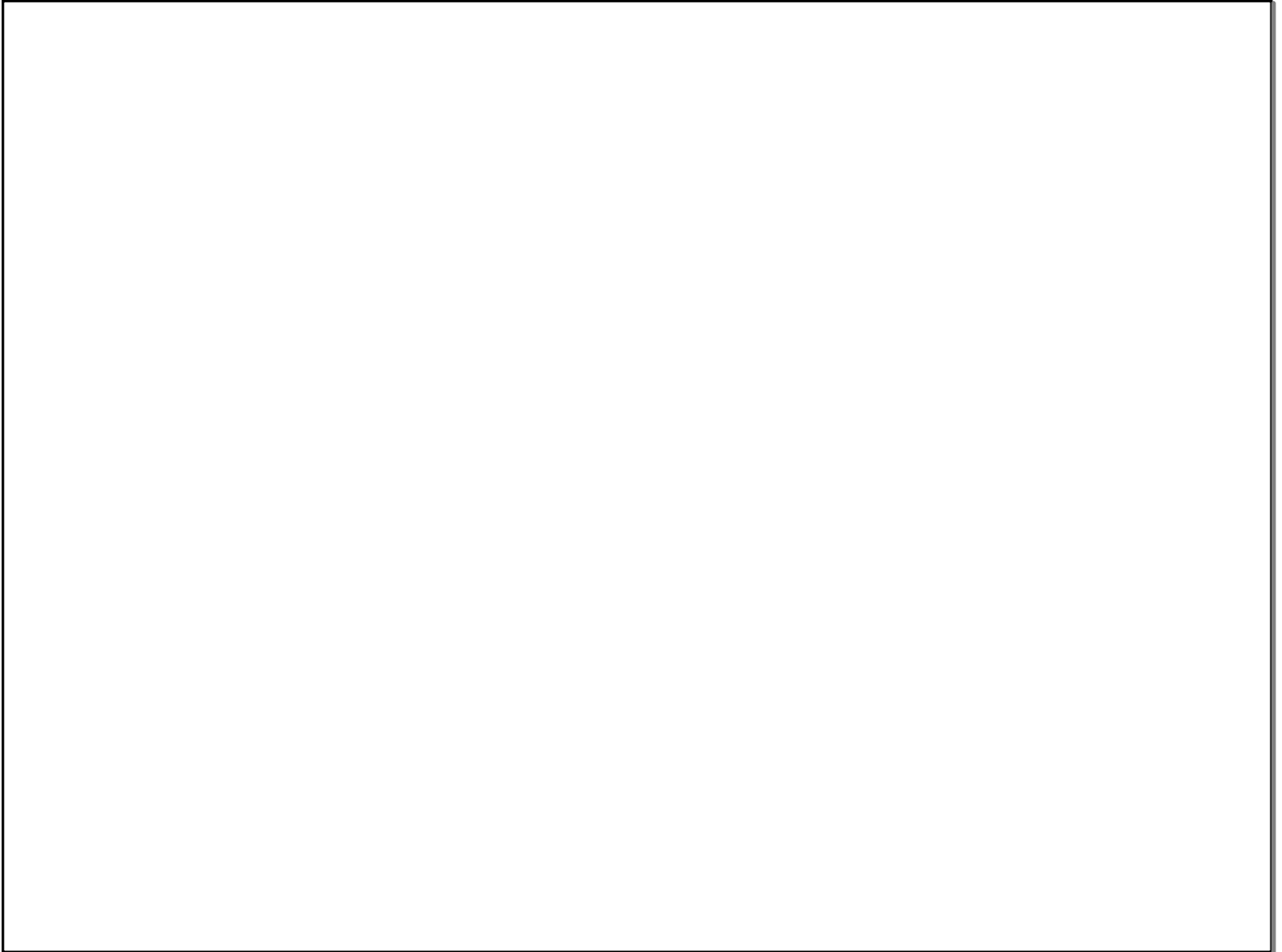
decimal that doesn't end

0.15923561423825....

0.7 $\bar{7}$

non-repeating decimal - doesn't repeat

0.382946412362175....



rational number - a # that can be written  
 in the form  $\frac{a}{b}$  where a and b are integers  
 "can be written as a fraction"

3.72    6     $\frac{2}{3}$      $\sqrt{49}$      $\sqrt{9}$   
 $0.34\overline{34}$     -4     $-5\frac{1}{2}$      $\sqrt{4}$      $\sqrt{36}$

irrational number - can't be written as a fraction  
 $0.283851260391928756\dots$

$\pi$

$\sqrt{40}$

$\sqrt{2}$      $\sqrt{3}$      $\sqrt{5}$      $\sqrt{6}$      $\sqrt{7}$      $\sqrt{8}$      $\sqrt{10}$      $\sqrt{11}$      $\sqrt{12}$



$$3\frac{1}{3}$$

$$3\frac{1}{3} \cdot 3\frac{1}{3}$$

$$\frac{10}{3} \cdot \frac{10}{3} = \frac{100}{9} = 11\frac{1}{9}$$

$$3\frac{1}{3} \cdot 3$$

$$\begin{array}{r} 8 \ 19 \\ \times 19 \\ \hline 171 \\ 170 \\ \hline 361 \end{array}$$

$$3\frac{1}{6} \cdot 3\frac{1}{6}$$

$$\frac{19}{6} \cdot \frac{19}{6} = \frac{361}{36} = 10\frac{1}{36}$$

$$\sqrt{10}$$

The set of rational numbers and the set of irrational numbers together make up the set of Real Numbers

# HW Solutions

Identify as rational or irrational

2.774

rational

$$\sqrt{36}$$

rational

$$3\frac{45}{99}$$

$$3.45\overline{45}$$

rational

$$\frac{7}{9}$$

rational



$$\sqrt{20}$$

irrational

$\pi$

irrational

19.294153

rational

$$19 \frac{294153}{1000000}$$

7

rational

$-3$   
*rational*

$$\frac{4}{5}$$

rational

9.2 $\bar{2}$

rational

# 7.3

rational



0.3733733373337...

*irrational*



