

NAME _____

HW # 2

1. What is the best sequence of words that describe the set of numbers listed below?

$(\frac{3}{5}, -10, 0.5\bar{1}, \sqrt{12}, 17)$

- (1) rational, integer, ~~irrational~~, irrational, natural
- (2) rational, ~~irrational~~, rational, irrational, whole
- (3) rational, real, rational, real, natural**
- (4) real, integer, rational, ~~rational~~, natural

$\frac{3}{5}$, -10 , $0.5\bar{1}$, $\sqrt{12}$, $17 \rightarrow$ Natural

\downarrow Integer Rational Irrational

Rational

All of these are REAL!

TRICKY!!

2. Identify the set of numbers that best describes the situation (Natural, Whole, Integer, Rational, Irrational)

a) The number of people wearing glasses in a room.



WHOLE

b) A person's shoe size.



RATIONAL

c) The daily high and low temperature as reported by the news.



INTEGERS

Write all names that describe each number (Real, Irrational, Rational, Integer, Whole, Natural)

3. -17.84 Rational (& Real)

* 4. $\frac{\sqrt{81}}{3} = \frac{9}{3} = 3$ Natural, Whole, Integer, Rational (& Real)

5. $\sqrt{30}$ Irrational (& Real)

Tell whether the given statement is true or false. Explain why.

6. All whole numbers are rational numbers **True** or False

Explanation:

All whole numbers can be turned into a fraction

7. All rational numbers are integers: **False**

Explanation:

Fractions & decimals that terminate or repeat are rational but not integers.

8. Some real numbers are irrational: **True** or False

Explanation:

π is real but irrational

Other examples are $\sqrt{7}$, $2.1286789\dots$