

In class work sheet: Section 1.2

Groups Members:

1. Put the correct mathematical symbol between the mathematical objects in order for the statement to be sensible and true. (Do not use \neq if there is a different answer.)

- $2 < 3$
- $3.455 < 3.46$
- $\pi < 4$
- $-4 > -6$
- $-3.455 > -3.46$
- $a \in \{a, b, c\}$
- Challenge Problems: $e < \pi, i \neq \pi$.

2. Choose the correct inequality, $<$, $>$, \leq , \geq which will make the following statements true:

- (a) $4 < x$ where x is any number between and not including 4 and 5.
- (b) $4 \leq x$ where x is any number between and including 4 and 5
- (c) $5 \geq x$ where x is any number between and including 4 and 5.

3. Translate each of the following from a statement of English to a mathematical statement

- (a) Eight is less than twelve.

$$8 < 12$$

- (b) Five is less than or equal to six.

$$5 \leq 6$$

- (c) Negative ten is greater than negative eleven.

$$-10 > -11$$

4. Choose and defend a negative sign convention for the following. Then change the numbers to integers reflecting your convention.

- (a) Mr. Miller deposited \$350 in his savings account. He later withdrew \$126.

$$350$$

$$-126$$

- (b) Katie bought 7 text books at the beginning of the semester and returned 6 at the end. (Keeping her math text - of course)

7

-6

- (c) Andy brought 15 signs to the protest. He lost 4 during the demonstration.

15

-4

5. Tell which of the following set or sets each number belongs to: \mathbb{N} , \mathbb{Z} , \mathbb{Q} , \mathbb{R} , the irrationals, or the whole numbers..

(a) $\sqrt{2}$ \mathbb{R}

(b) -3 \mathbb{Z}

(c) -3.2 \mathbb{Q}

(d) 0 \mathbb{Z}

(e) π \mathbb{R}