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Discussion2

1). If we have a set $N = \{6, 4, 8, 10\}$ and $P = \{10, 4, 6, 8, 8\}$. Is $N=P$?

- If we have a set $N = \{6, 4, 8, 10\}$ and $P = \{10, 4, 6, 8, 8\}$, N is not equal to P because they have different elements.

2). What is differences between real and rational numbers?

- Real numbers include all rational numbers, but also include irrational numbers, which cannot be expressed as a ratio of two integers. Rational numbers are numbers that can be expressed as a ratio of two integers.

3). If we have a set $L = \{d, b, p, p\}$ and $Q = \{p, d, d, c, p\}$. Is L subset Q ?

- If we have a set $L = \{d, b, p, p\}$ and $Q = \{p, d, d, c, p\}$, L is a subset of Q because all elements of L are also present in Q .

4). What is cardinality of " $A = \{x \in \mathbb{N}^+ \mid x < 168\}$ "?

- The cardinality of set A is 167 because it contains all natural numbers less than 168.

5). What is cardinality of " $B = \{e, \{e, e\}, \{e, a, e\}, c, \{c, e, c, e\}\}$ "? Power?

- The cardinality of set B is 4 because it contains our distinct elements: e , $\{e, e\}$, $\{e, a, e\}$, and c .

6). If we have a set $A = \{1, 3, 5\}$ and $B = \{9, 6, 3, 1\}$. What is "A union

B"? "A intersection B"? "A difference B"?

- If we have a set $A = \{1, 3, 5\}$ and $B = \{9, 6, 3, 1\}$
 - A union $B = 1, 3, 5, 6, 9$
 - A intersection $B = 1, 3$
 - A difference $B = 5$

7). Find $(A \cap B) \cup (B \cap C)$

A	B	C	$(A \cap B)$	$(B \cap C)$	$(A \cap B) \cup (B \cap C)$
0	0	0	0	0	0
0	0	1	0	0	0
0	1	0	0	0	0
0	1	1	0	1	1
1	0	0	0	0	0
1	0	1	0	0	0
1	1	0	1	0	1
1	1	1	1	1	1