

# I.D.E. - Intersection Difference Equivalence

Intersection, Difference, and Equivalence are terms used in set theory to define relationships between sets. Here are concise bullet points explaining each term:

- Intersection: the intersection of two sets is the set of elements that are common to both sets.
- Difference: the difference of two sets is the set of elements that are in one set but not in the other.
- Equivalence: two sets are equivalent if they have the same number of elements, i.e., they have a one-to-one correspondence.

Here's an example to illustrate these terms:

Let  $A = \{1, 2, 3, 4\}$  and  $B = \{3, 4, 5, 6\}$

- $A \cap B$  (Intersection):  $\{3, 4\}$
- $A - B$  (Difference):  $\{1, 2\}$
- $B - A$  (Difference):  $\{5, 6\}$
- $A \equiv B$  (Equivalence): A and B are not equivalent because they have different numbers of elements.