

\* INFINITE SET :-

A set is not finite i.e. the counting of whose elements is impossible is called an infinite set.

\* FOR EXAMPLE :-

- (i) The set of all straight line in a given plane.
- (ii) The set of all natural numbers.
- (iii) The set of real numbers b/w 1 and 2.



### Q3 (B) INTEREST AND TYPES:-

Interest is the rate lenders charge individuals to borrow money. Essentially interest is the cost of borrowing money. The amount you borrow is typical referred to the principal amount.

#### Types of INTEREST:-

→ Nominal interest refers to interest that compounds from the principal amount. The rate provides the exact amount of interest a person earns or pay for loans.

Example:-

loan of 100 → nominal int rates 6%  
( $100 \times 0.06$ ).

→ Real interest is similar to nominal interest. Both are considered types of simple interest. However real interest factors in inflation.

→ Effective interest uses compounding when calculating effective interest rate.



Q3: @ Explain the concept of Time Value of money with example?

\* Time value of money is defined as a concept which states that purchasing power of money differs with the passage of time.

\* EFFECTS :-

→ Spending with the amount of money today, we can buy more goods than what we can in future.

→ Saving money today has value in future in terms of fulfilling our future necessities.

→ Borrowing to enjoy the benefits of car today, you borrow money and repay it slowly in future.

→ Investing money will result in maximizing the value of our surplus money.



Q1 :- EQUAL SET :-

\* Equal sets are two or more sets having the same elements

Example :-

$$A = \{5, 10, 15, 20, 25\}$$

$$B = \{5, 10, 15, 20, 25\}$$

\* Finite and infinite set.

Finite sets are if it is called either void set or its elements can be counted by natural numbers and process of listing terminates at a certain natural numbers.

\* Example:  $\{1, 2, 4, 6\}$  is a finite because it has four elements.

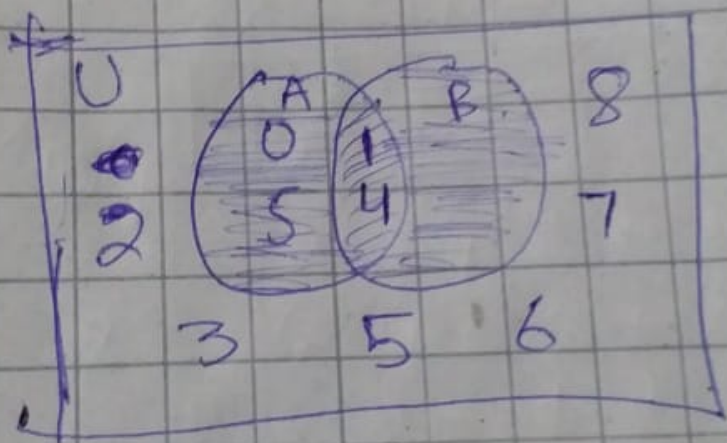


(81)

$$b) A = \{0, 1, 4, 5\}$$

$$B = \{1, 4\}$$

$$U = \{0, 1, 2, \dots, 8\}$$





Q2

$$5(x-3) - 7(6-x) = 24 - 3(8-x) - 3$$

$$5x - 15 - 42 + 7x = 24 - 24 + 3x - 3$$

$$12x - 57 = 3x - 3$$

$$12x - 3x = -3 + 57$$

$$9x = 54$$

$$x = \frac{54}{9}$$

$$\boxed{x = 6}$$



Q2

$$2x - y = 3 \quad \text{--- i}$$

$$3x + 2y = 8 \quad \text{--- ii}$$

Taking eq no (i)

$$2x - y = 3$$

$$\boxed{2x - 3 = y}$$

put in (ii)

$$3x + 2y = 8$$

$$3x + 2(2x - 3) = 8$$

$$3x + 4x - 6 = 8$$

$$7x = 8 + 6$$

$$7x = 14$$

$$x = \frac{14}{7} = 2$$

$\boxed{x = 2}$  put in (iii)

$$2x - 3 = y$$

$$2 \times 2 - 3 = y$$

$$4 - 3 = y$$

$$\underline{\underline{1 = y}}$$