



## Introduction:

### Questions: (\* questions can be used for evaluation)

1. Can you identify if the below numbers are in arithmetic progression ?  
Write down the reason for your answer in each case
  - a)  $\{1, 2, 3, 4, 5, 6, 7, 8\}$
  - b)  $\{-1, 1, 3, 5, 7, 9\}$
  - c)  $\{1, 5, 8, 1, 5, 8\}$
2. In your school can you identify some patterns that are repeating itself?
3. With your knowledge on modulo arithmetic can you solve the following?
  - a.  $* 24 \text{ Mod } 12 =$
  - b.  $* 15 \text{ Mod } 30 =$
  - c. Can you identify a relationship between the first and second problem?
  - d.  $* 10 \text{ Mod } 7 =$
  - e.  $* 23 \text{ Mod } 2 =$
  - f. If  $10 \text{ Mod } x = 1$  can you find one value of  $x$
  - g. If  $20 \text{ Mod } x = 3$  then find  $x$
  - h. If  $X \text{ mod } 5 = 3$  can you find one value of  $x$
  - i. If  $x \text{ mod } 7 = 2$  can you find one value of  $x$