Nama : Syaripuddin
Nim : 105841107222
Prodi : Informatika
kelas : 1.A
Matkul : Matematika Dasar

Ujian MID Tast MK

1. a $X \in A$
   b $D \supset H$

2. a. $2 + 6 + 10 + 14 + 18$
   $+4 \quad +4 \quad +4 \quad +4$

$b = 4$

$a = 2$

$\boxed{U_n = a + (n-1)\,b}$

$U_n = 2 + (n-1) \cdot 4$

$U_n = 2 + 4n - 4$

$U_n = 4n - 2$

$$\sum_{n=1}^{5} 4n-2$$

b. $2 + 4 + 8 + 16 + 32$
   $\times 2 \quad \times 2 \quad \times 2 \quad \times 2$

$r = 2$

$b = 2$

$\boxed{U_n = a\, r^{n-1}}$

$U_n = 2 \cdot 2^{n-1}$

$U_n = 2 \cdot 2^{-1} \cdot 2^{n}$

$U_n = 2^{n}$

$$\sum_{n=1}^{5} 2^{n}$$

c. $1 + 3 + 9 + 27$
   $\times 3 \quad \times 3 \quad \times 3$

$\boxed{U_n = a\, r^{n-1}}$

$a = 1$

$r = \frac{3}{1} = 3$

$U_n = 1 \cdot 3^{n-1}$

$U_n = 3^{n-1}$

$$\sum_{n=1}^{4} 3^{n-1}$$

3. $|2x - 1| = |4x + 3|$

$(2x-1)^2 - (4x+3)^2 = 0$

$(6x + 2)(-2x - 4) = 0$

$6x + 2 = 0$ atau $-2x - 4 = 0$

$x = \frac{2}{6}$ $\quad -2x = 4$

$x = \frac{1}{3}$ $\quad x = \frac{4}{-2}$

$x = -2$

$HP = \{-2, \frac{1}{3}\}$

4. a. $5(3 \times 4^2 : 6 - 7)$

$= 5(3 \times 16 : 6 - 7)$

$= 5(48 : 6)$

$= 5(8 - 7)$

$= 5(1)$

$= 5$

b. $14 + 21 \times 5 : 5^2 \times 23 - 9$

$= 14 + 105 : 25 \times 23 - 9$

$= 14 + 4{,}2 \times 23 - 9$

$= 14 + 96{,}6 - 9$

$= 110{,}6 - 9$

$= 101{,}6$