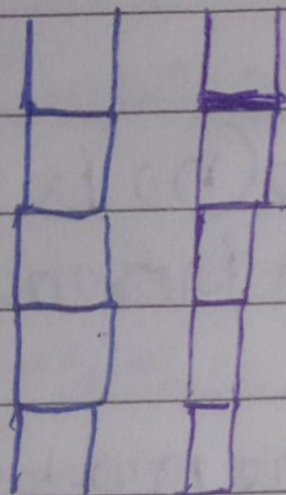


S. Q)



$$i) F = 3n + 2$$

$$16 = ii) 50 \text{ and } 92$$

$$3n + 2$$

$$= 16n = 3 \times 16 + 2$$

$$= 48 + 2$$

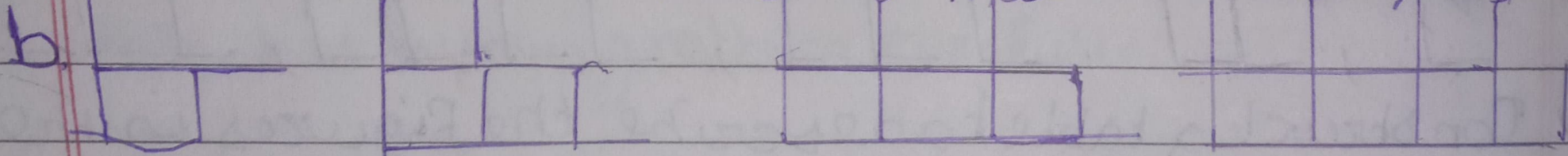
$$= 50 \text{ numbers match stick the quids.}$$

$$30th = 3 \times 30 + 2$$

$$= 90 + 2$$

$$= 92 \text{ match stick.}$$

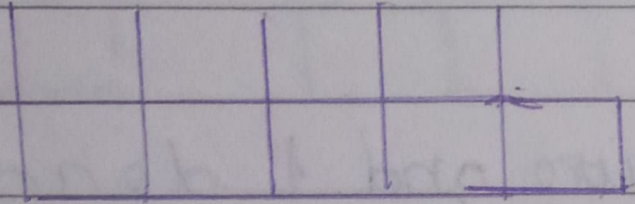
required



$\frac{1}{n}$

i) $F = \frac{1}{n} + 1$

ii) $G \text{ and } 12$



b)

$$C_{n+1}$$

$$\cdot 16^{\text{th}} = 4 \times 16 + 1$$

$$= 64 + 1$$

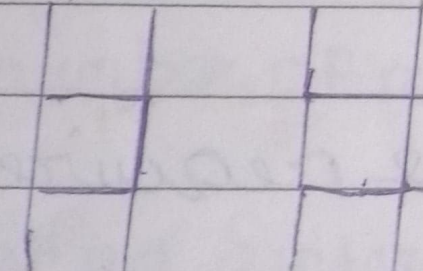
= 65 matchstick required

$$\text{30}^{\text{th}} = 4 \times 30 + 1$$

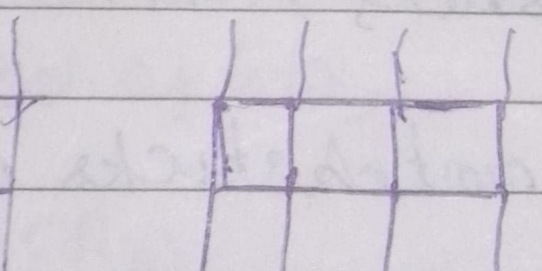
$$= 120 + 1$$

= 121 matchstick

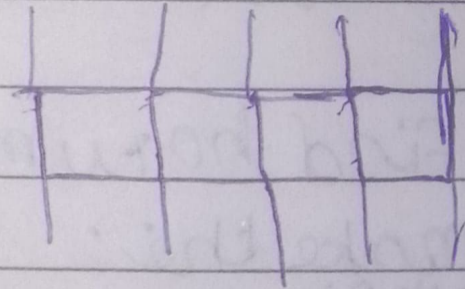
C,



$\Rightarrow F = 5n + 3$



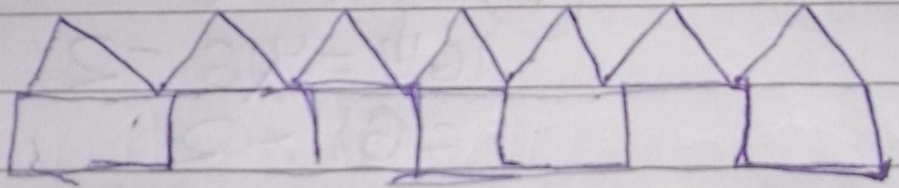
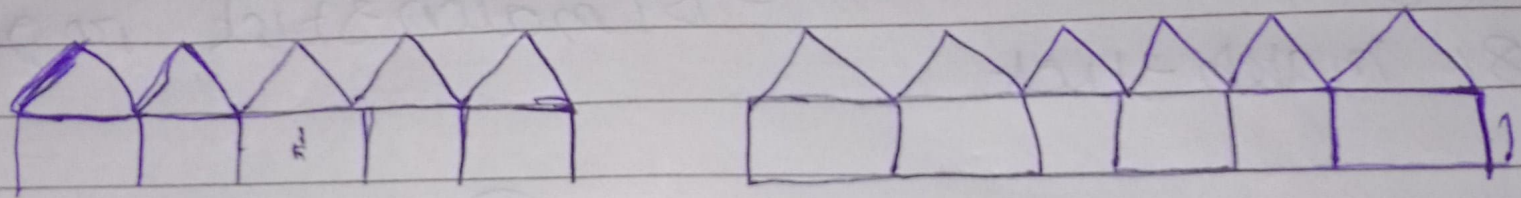
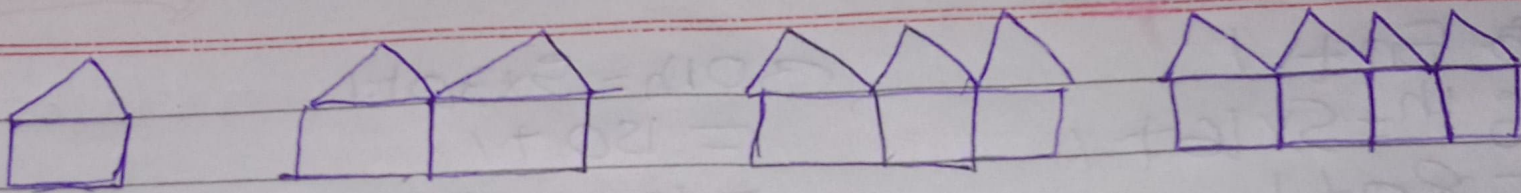
$\Rightarrow 83 \text{ and } 153$



c) $for\ n = 5n + 3$
 $16^{th} = 5 \times 16 + 3$
 $= 80 + 3$
 $= 83 \text{ match sticks}$

$30^{th} = 5 \times 30 + 3$
 $= 150 + 3$
 $= 153 \text{ match sticks}$

d)

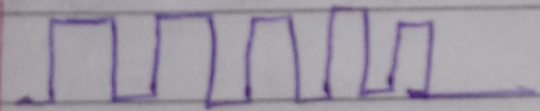
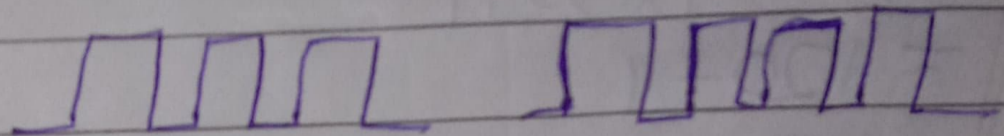
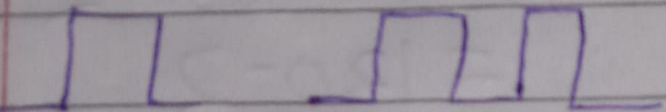


- i) $F = 5n + 1$
- ii) 81 and 151

d) ~~50~~ $5n + 1$
 $16^{\text{th}} = 5 \times 16 + 1$
 $= 80 + 1$
 $= 81$ match stick

$30^{\text{th}} = 5 \times 30 + 1$
 $= 150 + 1$
 $= 151$ match stick required

e



$f = 4n + 1$
 (1) GS and 12r

$$e) \quad 4n+1$$

$$16^{\text{th}} = 4 \times 16 + 1$$

$$= 64 + 1$$

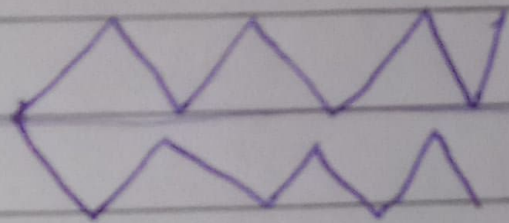
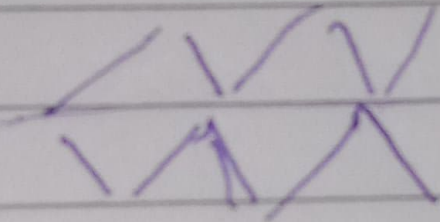
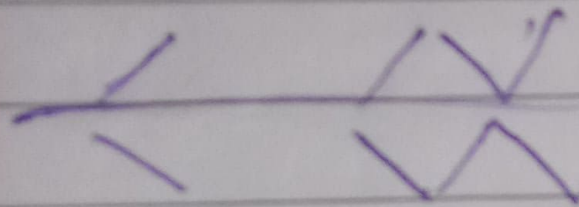
- 65 match sticks require

$$30^{\text{th}} = 4 \times 30 + 1$$

$$= 120 + 1$$

= 121 matchsticks require

f)



- i) $F = 4n - 2$
- ii) G 2 and 118.

$$\textcircled{f} \quad 4n - 2$$

$$16^{\text{th}} = 4 \times 16 - 2$$

$$= 64 - 2$$

= 62 matchsticks.

$$30^{\text{th}} = 4 \times 30 - 2$$

$$= 120 - 2$$

= 118 match.