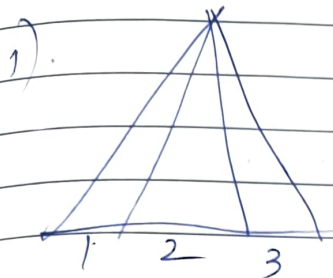


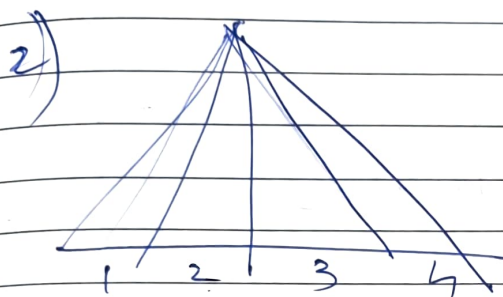
# Count the number of Triangles



$$1 + 2 + 3 = 6$$

OR

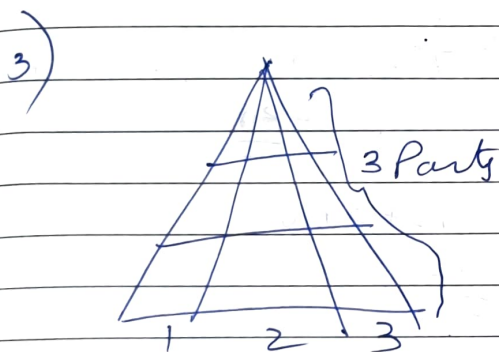
$$\frac{3 \times 4}{2} = 6$$



$$1 + 2 + 3 + 4 = 10$$

OR

$$\frac{4 \times 5}{2} = 10$$

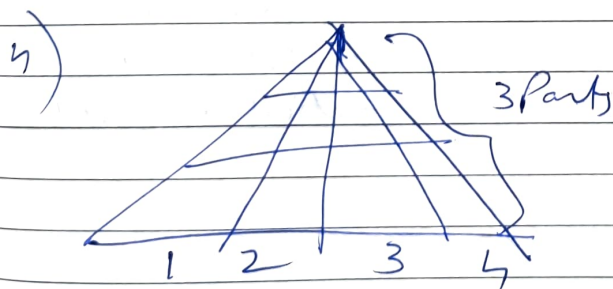


$$1 + 2 + 3 = 6$$

$$6 \times 3 = 18$$

~~10 + 10 + 10~~  
~~=~~

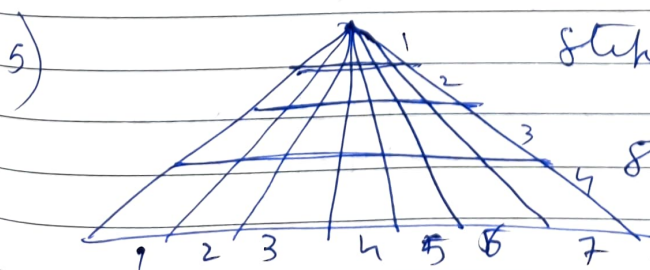
~~OR 3 x 6 = 18~~



So,

$$1 + 2 + 3 + 4 = 10$$

Then,  $10 \times 3 = 30$

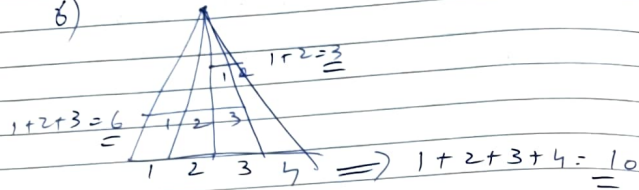


Step 1:  $1 + 2 + 3 + 4 + 5 + 6 + 7 = 28$

Step 2: 4 Parts

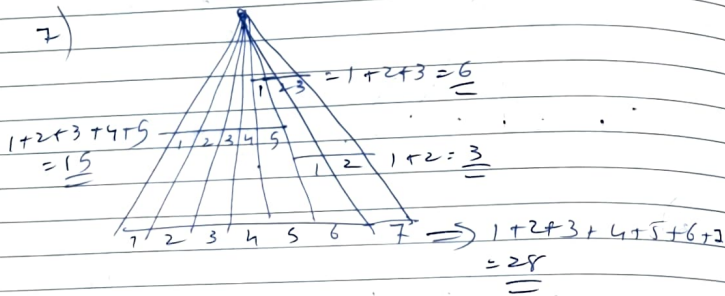
So,  $28 \times 4 = 112$

6)



Total =  $10+6+3=19$

7)



So, Total =  $28+15+3=52$

8)

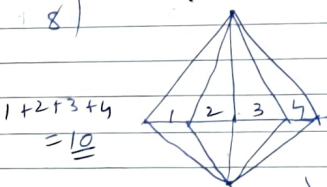


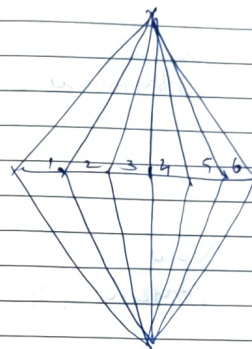
Figure is almost symmetrical  
 The central line is vertical absolutely

1) So,  $10 \times 2 = 20$

2) The highest row is 4,

3) So, Total triangles =  $20+4=24$

9)



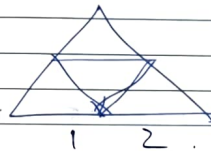
Note: The central line is absolutely vertical.

So,  $1+2+3+4+5+6=21$

Now, highest row = 6

So, Total =  $21+6=27$

10)

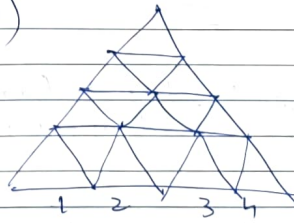


Note: Base is divided into even parts.

Here  $n=2$

Formula:  $\frac{n(n+2)(2n+1)}{8}$   
 $= \frac{2(2+2)(2 \times 2+1)}{8}$   
 $= \frac{(2 \times 4 \times 5)}{8}$   
 $= 5/1$

11)

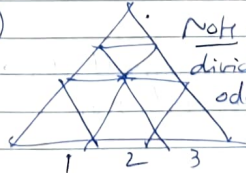


Note: Base is divided into even parts.

Here  $n=4$ .

Formula:  $\frac{n(n+2)(2n+1)}{8}$   
 $= \frac{4(4+2)(2 \times 4+1)}{8}$   
 $= \frac{4 \times 6 \times 9}{8}$   
 $= 27$

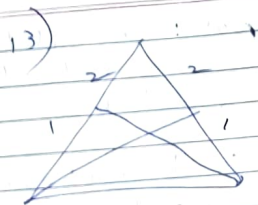
12)



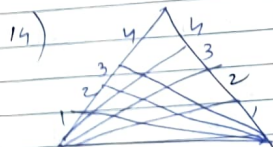
Note: Base is divided into odd parts.

Here  $n=3$ .

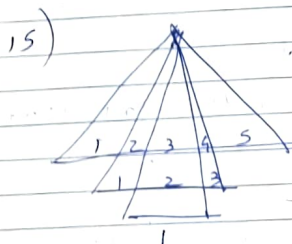
Here, formula is  $\left[ \frac{n(n+2)(2n+1)}{8} - 1 \right]$   
 $= \left[ \frac{3(3+2)(2 \times 3+1)}{8} - 1 \right]$   
 $= \frac{3 \times 5 \times 7 - 1}{8} = 13$



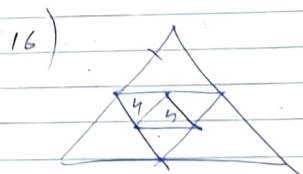
Now,  
Answer is  $2^3 = 8$



Now,  
Answer is  $4^3 = 64$



$$\begin{array}{r} 1+2+3+4+5 = 15 \\ \quad \quad \quad + \\ 1+2+3 \quad \quad \quad 6 \\ \quad \quad \quad + \\ 1 \quad \quad \quad 1 \\ \hline = 22 \end{array}$$

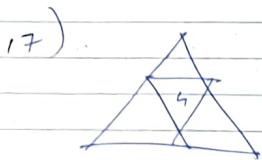


Note: 1 small triangle  
is denoted as  $n$  triangle

So,

$$n+n+1 = 9$$

Here 1 is for the largest  
triangle



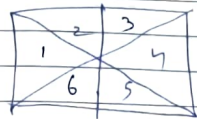
Note: 1 small triangle  
is denoted as  $n$ .

So,

$$n+1 = 5$$

Here 1 is for the largest triangle

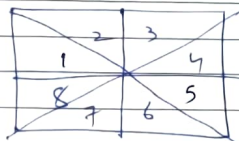
18)



Here, the largest number = 6  
So,  $6 \times 2 = 12$

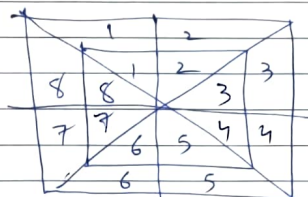
Answer is 12 triangle

19)



Here, the largest number = 8  
So,  $8 \times 2 = 16$  triangle

20)



~~Step 1~~ Step 1: In the smaller square,  
largest no. is 8.

So, no. of triangle =  $8 \times 2 = 16$ .

Step 2: In the larger square,  
largest no. is 8

So, no. of triangle =  $8 \times 2 = 16$

$\therefore$  Total triangle =  $16 + 16$   
 $= 32$