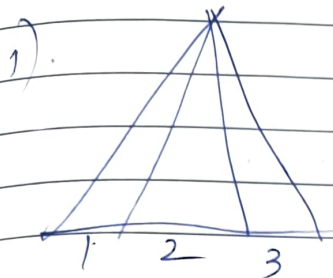


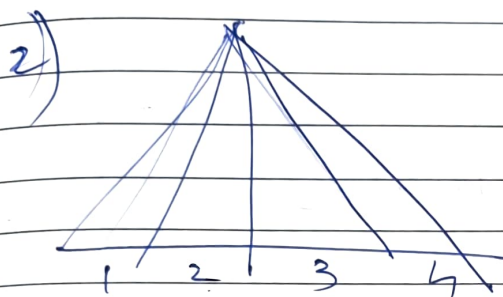
Count the number of Triangles



$$1 + 2 + 3 = 6$$

OR

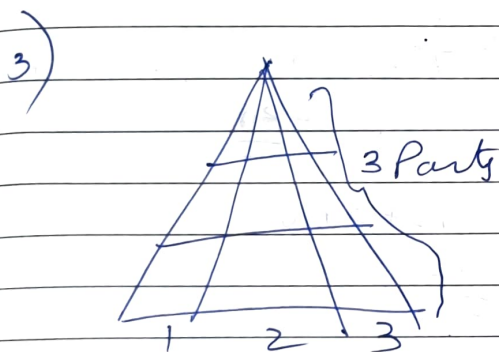
$$\frac{3 \times 4}{2} = 6$$



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

OR

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

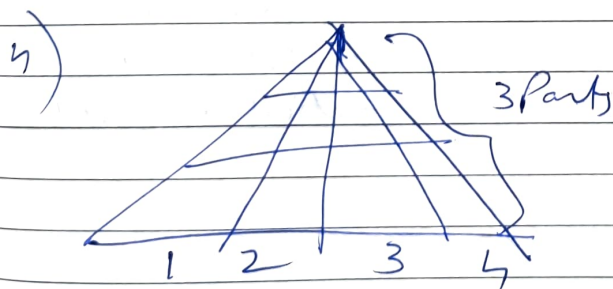


$$1 + 2 + 3 = 6$$

$$6 \times 3 = 18$$

~~10 + 10 + 10~~
~~30~~

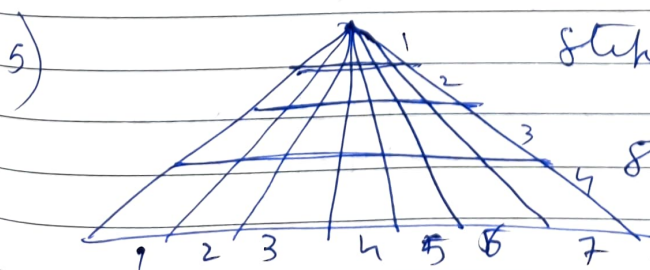
~~30~~ ~~30~~ ~~30~~



So,

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

Then, $10 \times 3 = 30$

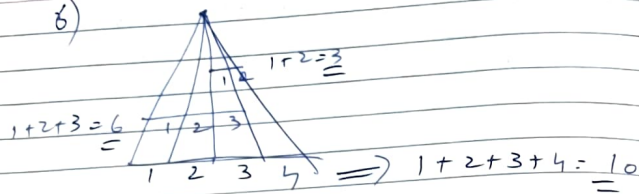


Step 1: $1 + 2 + 3 + 4 + 5 + 6 + 7 = 28$

Step 2: 4 Parts

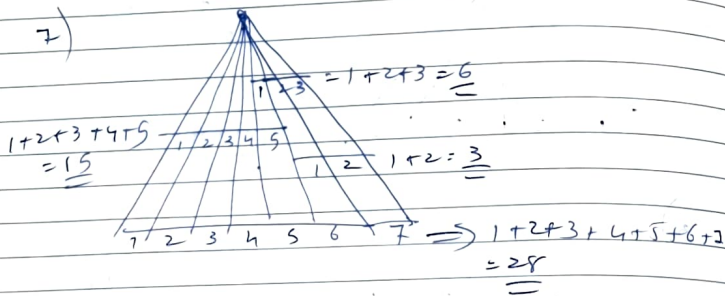
So, $28 \times 4 = 112$

6)



Total = $10+6+3=19$

7)



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

8)

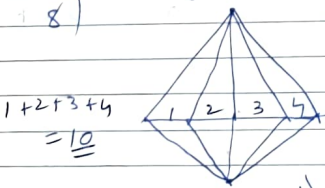
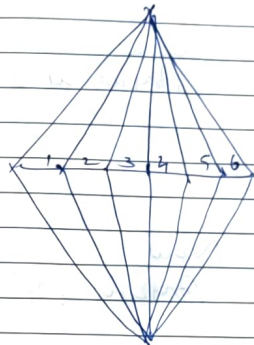


Figure is almost symmetrical
The central line is vertical absolutely

- 1) So, $10 \times 2 = 20$
- 2) The highest row is 4.
- 3) So, Total triangles = $20+4=24$

9)



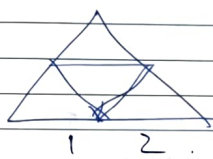
Note: The central line is absolutely vertical.

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

Now, highest row = 6

So, Total = $21+6=27$

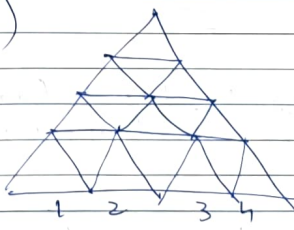
10)



Note: Base is divided into even parts.

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

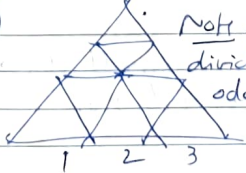
11)



Note: Base is divided into even parts.

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

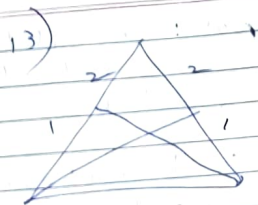
12)



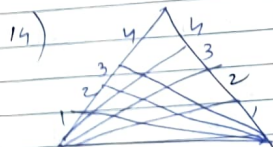
Note: Base is divided into odd parts.

Here $n=3$.

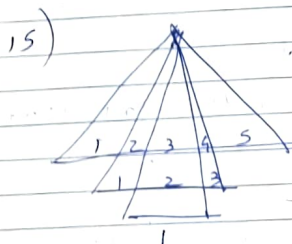
Here, formula is $\left[\frac{n(n+2)(2n+1)}{8} - 1 \right]$
 $= \left[\frac{3(3+2)(2 \times 3+1)}{8} - 1 \right]$
 $= \frac{3 \times 5 \times 7 - 1}{8} = 13$



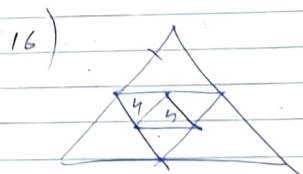
Now,
Answer is $2^3 = 8$



Now,
Answer is $4^3 = 64$



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

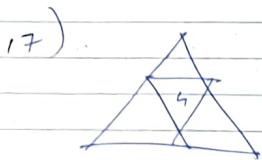


Note: 1 small triangle
is denoted as n triangles

So,

$$n+n+1 = 9$$

Here 1 is for the largest
triangle



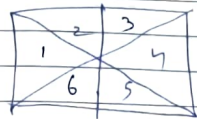
Note: 1 small triangle
is denoted as n .

So,

$$n+1 = 5$$

Here 1 is for the largest triangle

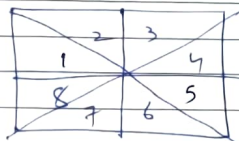
18)



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

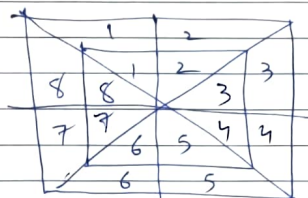
Answer is 12 triangles

19)



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

20)



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

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

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

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

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