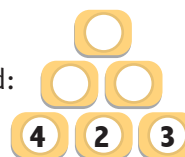


# Pyramid Parts

**ACTIVITY**

Amandeep and Mutu are looking at this number pyramid:



4 + 2 is 6.  
So 6 goes in here.



2 + 3 is 5.  
So 5 goes in here.



The top square is  
the answer to 6 + 5.



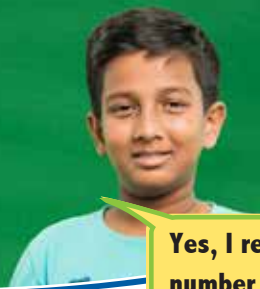
So 11 goes in there.



Hmm ... Is there a way  
to work out the  
number in the top  
square without first  
working out the  
middle squares?

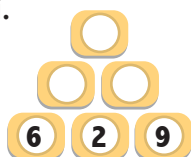


Yes, I reckon the top  
number will be 20.

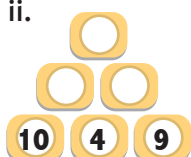


1. a. Is Mutu right?  
b. How could he have worked out the top number?
2. a. Work out the top numbers in these pyramids without filling in the middle squares.

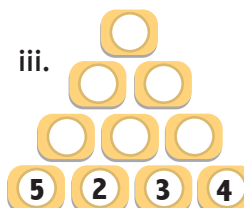
i.



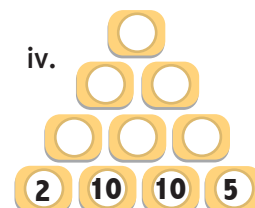
ii.



iii.



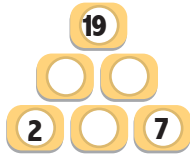
iv.



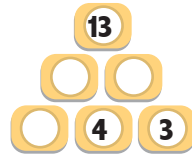
- b. Can you explain how the pyramids in this question work?

3. What are the missing bottom numbers in these pyramids?

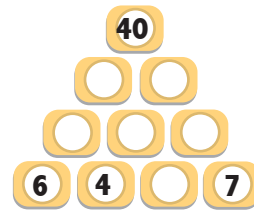
a.



b.



c.



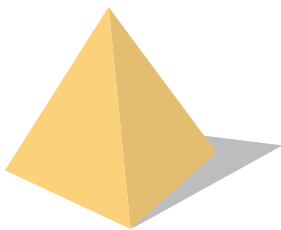
4. Amandeep noticed something interesting about any rectangular box she drew on a calendar. For example:

JANUARY						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

$$2 + 10 = 3 + 9$$

FEBRUARY						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		

$$13 + 22 = 15 + 20$$



MARCH						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
31					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

$$5 + 27 = 6 + 26$$



- What did she notice?
- Why do you think this happens? (For example, does it work for all rectangles with 2 sets of 2 numbers as shown in the January calendar? Does it work for all rectangles with 2 sets of 3 numbers as shown in the February calendar?)