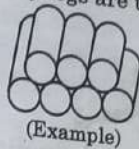


33.

- (a) The ratio of the 11<sup>th</sup> term to 17<sup>th</sup> term of an A.P. is 3 : 4. Find the ratio of 5<sup>th</sup> term to 21<sup>st</sup> term of the same A.P. Also, find the ratio of the sum of first 5 terms to that of first 21 terms.

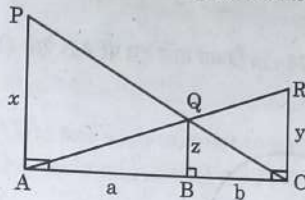
OR

- (b) 250 logs are stacked in the following manner :  
22 logs in the bottom row, 21 in the next row, 20 in the row next to it and so on (as shown by an example). In how many rows, are the 250 logs placed and how many logs are there in the top row ?



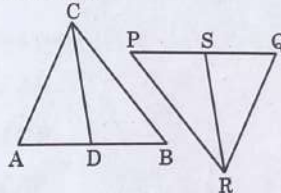
(Example)

34. (a) PA, QB and RC are each perpendicular to AC. If AP = x, QB = z, RC = y, AB = a and BC = b, then prove that  $\frac{1}{x} + \frac{1}{y} = \frac{1}{z}$ .



OR

- (b) In the given figure, CD and RS are respectively the medians of  $\triangle ABC$  and  $\triangle PQR$ . If  $\triangle ABC \sim \triangle PQR$  then prove that :  
(i)  $\triangle ADC \sim \triangle PSR$   
(ii)  $AD \times PR = AC \times PS$



35. A chord of a circle of radius 14 cm subtends an angle of  $60^\circ$  at the centre. Find the area of the corresponding minor segment of the circle. Also find the area of the major segment of the circle.