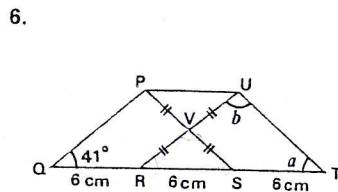
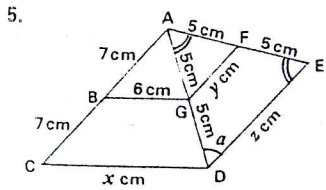
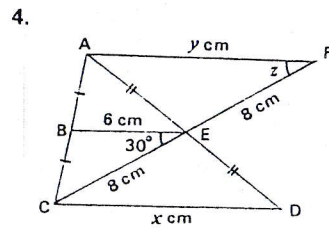
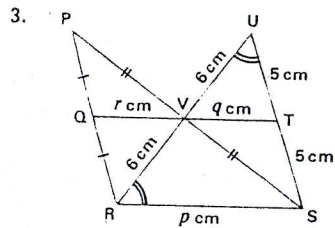
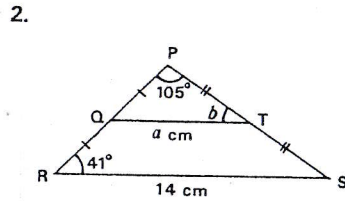
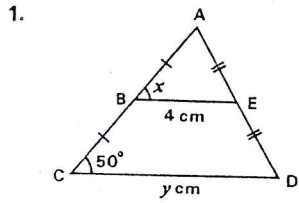
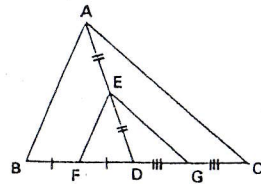


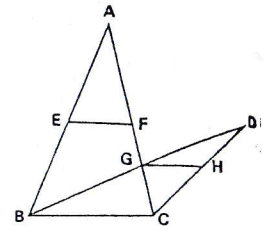
Find the values of the unknowns in each of the following. [Nos. 1–6]



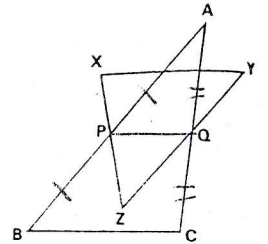
7. In the figure, E, F and G are the mid-points of DA, DB and DC respectively. Prove that  
 (a)  $EF \parallel AB$  and  $EG \parallel AC$ ,  
 (b)  $\angle FEG = \angle BAC$ .



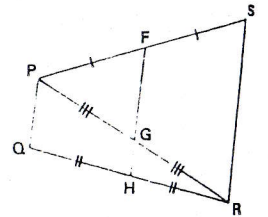
8. In the figure, E, F, G and H are the mid-points of AB, AC, DB and DC respectively. Prove that  
 (a)  $EF = GH$ ,  
 (b)  $EF \parallel GH$ .



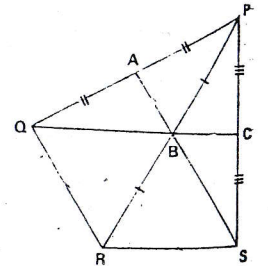
9. In the figure, P is the mid-point of AB and XZ. Q is the mid-point of AC and YZ. Prove that  
 (a)  $XY = BC$ ,  
 (b)  $XY \parallel BC$ .  
 [Hint : Join PQ.]



10. In the figure, F, G and H are the mid-points of the sides PS, PR and QR respectively. FGH is a straight line. Prove that  
 (a)  $PQ \parallel FH \parallel SR$ ,  
 (b)  $FH = \frac{1}{2}(PQ + SR)$ .



11. In the figure, A, B and C are the mid-points of PQ, PR and PS respectively. ABS and QBC are straight lines. Prove that  
 (a) BQRS is a parallelogram,  
 (b)  $QB = 2BC$ .



12. In the figure, P, Q and R are mid-points of AB, BC and CA respectively. Prove that  
 perimeter of  $\triangle PQR = \frac{1}{2} \times$  perimeter of  $\triangle ABC$ .

