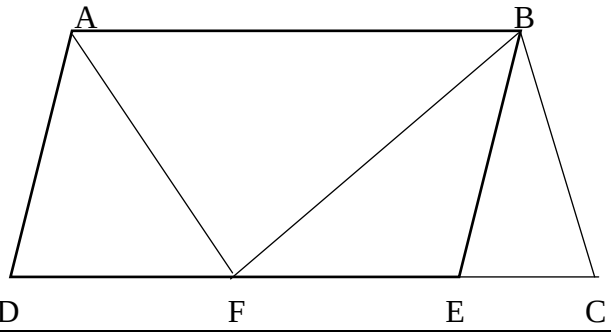
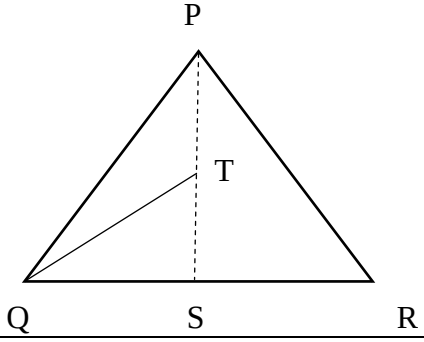
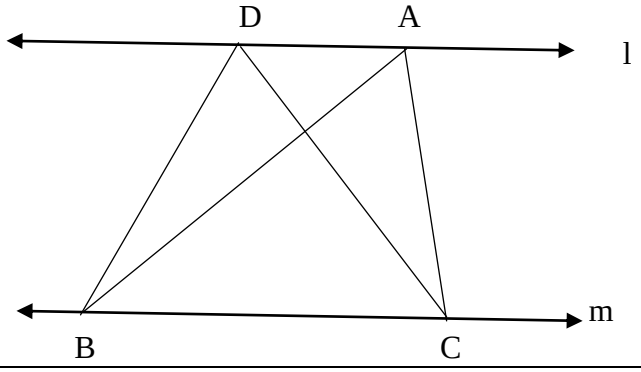
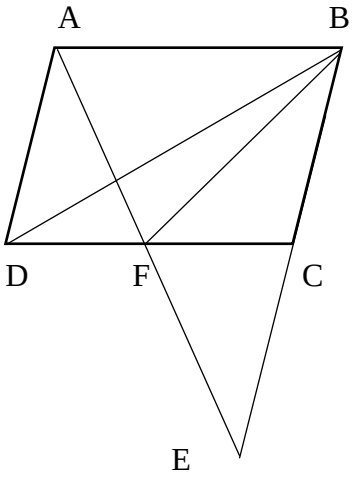
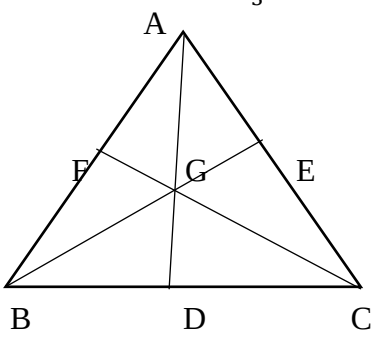
INDIAN SCHOOL DARSAIT
DEPARTMENT OF MATHEMATICS

Subject : Mathematics Worksheet No: 10	Topic : Areas of Parallelograms and Triangles.	Date of Worksheet : 12-11-2017
Resource Person: Mrs. Anu Likson		Date : _____
Name of the Student :_____	Class &Division : IX	Roll Number : __

	Section A (Basic Skill)	**Marks**
	Answer the following questions:	
1.	Simplify: (12 X 0.3) + (0.7 X 0.5)	1
2.	Find the LCM of 35, 120, 25	1
3.	Find the HCF of 120, 24	1
4.	Simplify (180+ 12.5) – (32+1.05)	1
	Section B Answer the following questions:	
1.	Triangles PQR and QSR lie on the same base QR. Also, $\angle$ PSQ = $\angle$ RQS. If ar (ΔPQR) = 12 cm^2, find ar (Δ QSR).	2
2.	Prove that the diagonals of a parallelogram bisect each other.	2
3.	In the given figure, ABED is a parallelogram in which DE= EC. Show that ar (ABF) = ar (BEC).  	2
4.	ΔABC and ΔABD are two triangles on the same base AB. If the line segment CD is bisected by AB at O. show that ar(ABC) = ar(ABD).	3
5.	In the figure, T is the midpoint of median PS of ΔPQR. Show that , ar(QTS) = $\frac{1}{4}$ar(ΔPQR)  	3

6.	In the given figure , ABC and DBC are triangles on the same base and between the parallel lines l and m. If AB = 3cm, BC= 5cm, $\angle A = 90^0$, find the area of ΔDBC.  	3
7.	D is the midpoint of side BC of ΔABC and E is the midpoint of BD. If O is the midpoint of AE, then prove that ar(ΔBOE) = $\frac{1}{8}$ar (ΔABC).	3
	Section C	
1.	PQRS is a square. N and M are the midpoints of sides SR and QR respectively. O is a point on diagonal PR such that OP= OR. Show that ONRM is a square. Also find the ratio of ar(ΔORM) and ar(PQRS).	4
2.	In the figure, ABCD is a parallelogram in which BC is produced to E such that CE = BC. AE intersects CD at F. Show that ar (ΔBDF) = $\frac{1}{4}$ar(ABCD).  	4
3.	The medians of ΔABC intersects at G. Prove that , ar(ΔAGB) = ar (ΔAGC) = ar(ΔBGC) = $\frac{1}{3}$ar(ABC).  	4