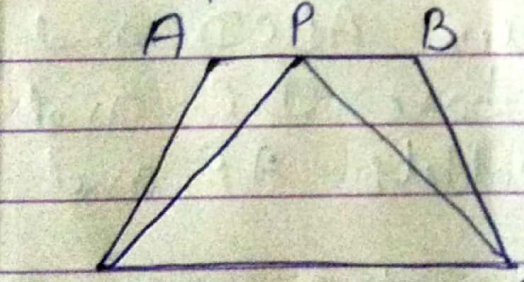
13/09/XX Class-IXth (MATHS) K. Kanhaiya

Topic :- Area of Parallelograms and Triangles.

Note :- If A and B are two Congurent figures, then

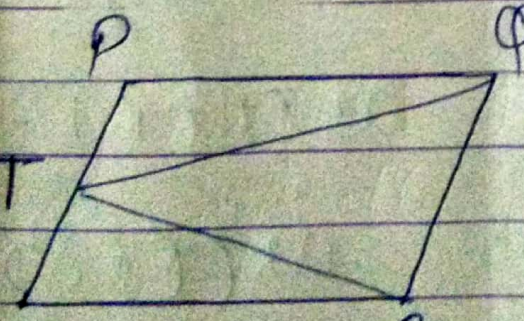
$ar(A) = ar(B)$.

⇒ Which of the following figures lie on the same base and between the same parallels. In such a case, write the Common base and two parallels.



(i)

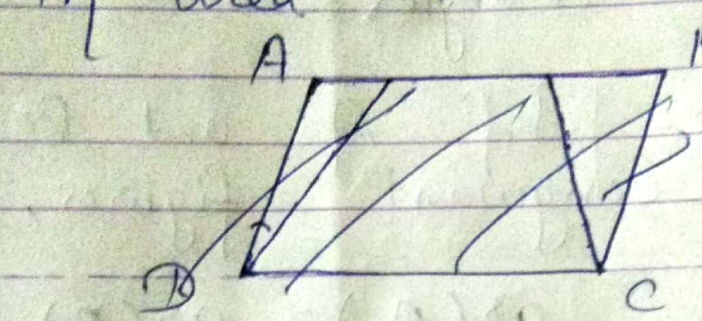
Here ΔPDC and quad ABCD are on the same base CD and $DC \parallel AB$.



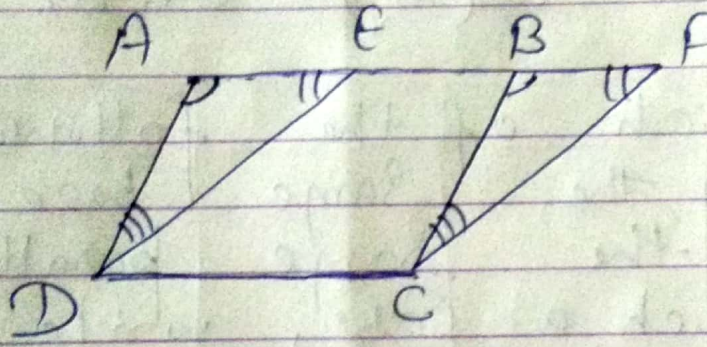
Here Also. ΔTQR and quad PQRS are on same base and bet^{n} same parally

Theorem:- Prove that parallelograms on the same base and between the same parallels are equal in area

Ans→



Ans→



Two parallelogram ABCD and EFCD are on same base DC and between same parallels AF and DC are given

clearly $\Delta ADE \cong \Delta BCF$ by ASA

$\therefore$ ar(ABCD) = ar(ADE) + ar(EDCB)

= ar(BCF) + ar(EDCB)

= ar(EFCD).

So, parallelogram ABCD and EFCD are equal in area