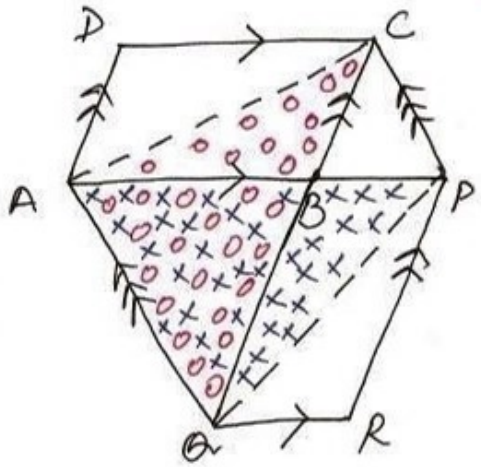
ex 9.3

(9)



To Show -
ar (ABCD) = ar (PBQR)

Proof CP ∥ AQ

ar (△CAQ) = ar (△PQA) [△s on same base and between same parallel lines]

⇒ ar (△ABC) + ar (△BAQ) = ar (△QBP) + ar (△BAQ)

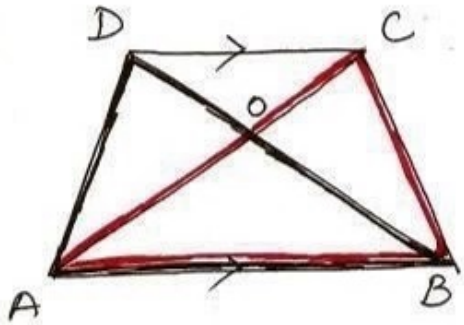
⇒ ar (△ABC) = ar (△QBP)

(×2) 2 ar (△ABC) = 2 ar (△QBP)

⇒ ar (11gm ABCD) = ar (11gm PBQR)

[diagonal divides a 11gm into 2 △s equal in area]

(10)



To Prove ar (AOD) = ar (BOC)

Proof DC ∥ AB

ar (△DAB) = ar (△CBA)

[△s on same base and between same parallel lines]

⇒ ar (△AOD) + ar (△AOB) = ar (△BOC) + ar (△AOB)

⇒ ar (△AOD) = ar (△BOC)