Ex. 13

1.

Area of $\Delta PBC = 480 cm^2$

(i) Area of ||gm ABCD $= 480 \times 2$
$= 960 cm^2$

(ii). Area of ||g BCQP $= 960 cm^2$

(iii) Length of Altitude from A on CD

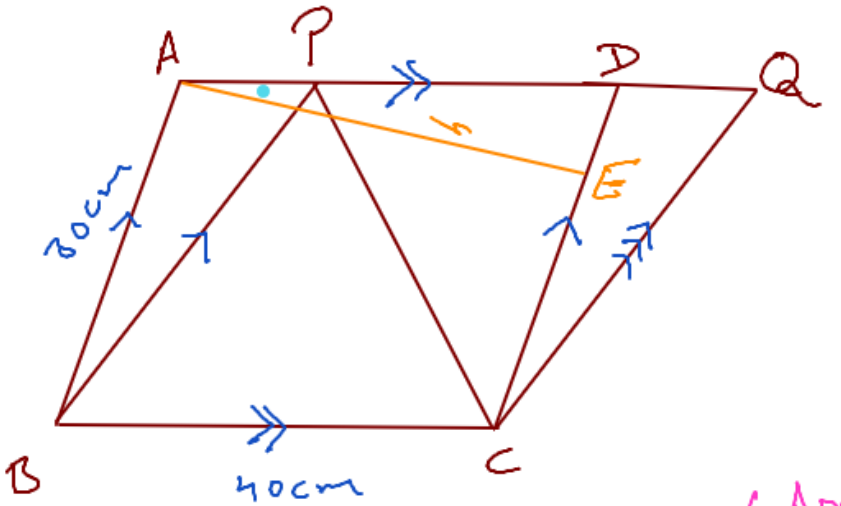
In □ ABCD

Area of ||gm ABCD $= b \times h$

$960 = CD \times h$

$960 = 30 \times h$

$h = 960/30 = 32 cm$



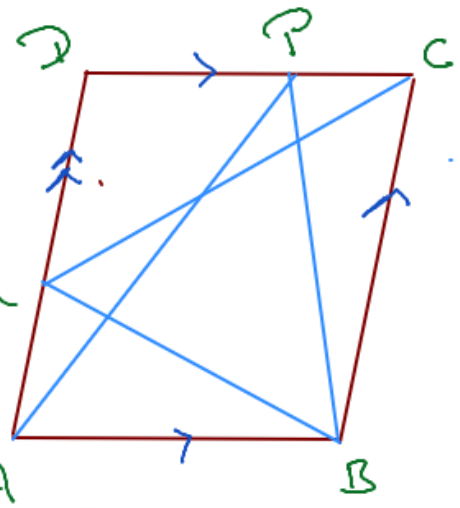
(iv) Area of $\Delta PCQ = \frac{1}{2}$ of Area ||gm BCPQ

$= \frac{1}{2} \times 960$

||gm BCQP & ΔPCQ are on the same base and bet^n same parallels

$= 480 cm^2$

2. To Prove: Area of ΔAPB = Area of ΔBQC



In ||gm ABCD and Δ APB

the ||gm and the Δ are on the same base AB and they are bet^{n} the same parallels DC

Hence Area of $\Delta APB = \frac{1}{2}$ Area of ||g ABCD - - - - - (i)

Similarly in ||gm ABCD and Δ BQC. They are on the same BC and bet^{n} same parallels AD

Hence, Area of $\Delta BQC = \frac{1}{2}$ Area of ||gm ABCD - - - (ii)

from eq^{n} (i) & (ii)

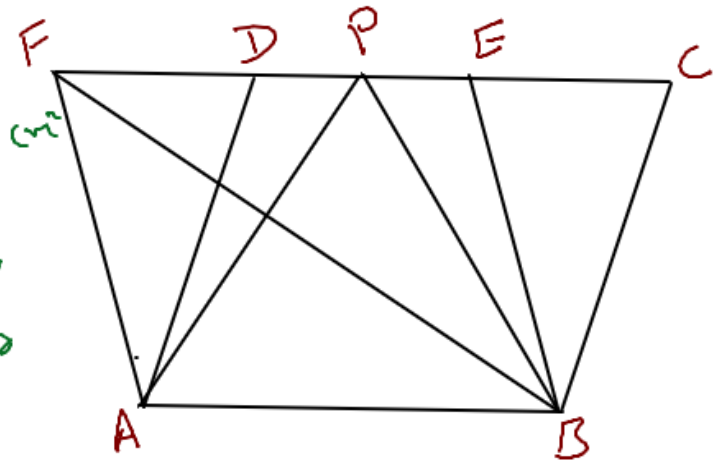
Area of ΔAPB = Area of ΔBQC Hence Proved

3(a).

(i) Area of llgm ABEF =

Area of llgm ABCD = 120 cm²

(Reason: If two llgms are on the same base and bet^n same llls then their area will be equal)



(ii) Area Δ APD = 60 cm²

(iii) Area of ΔBFE = $\frac{1}{2}$ of Area of llg ABEF

$= \frac{1}{2} \times 120$

$= 60\ cm^2$