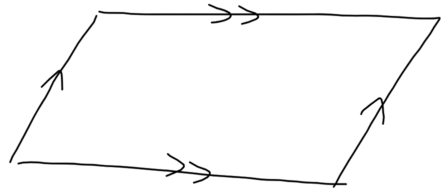
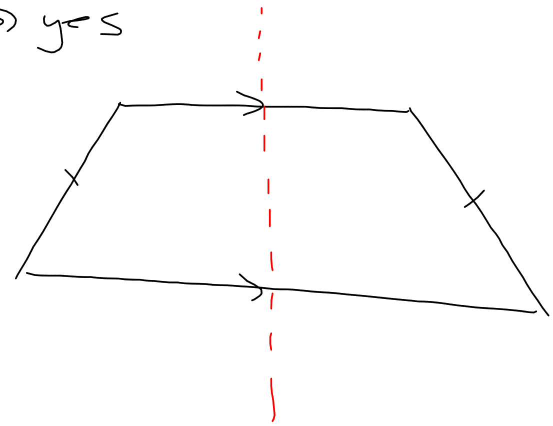
6/ a)



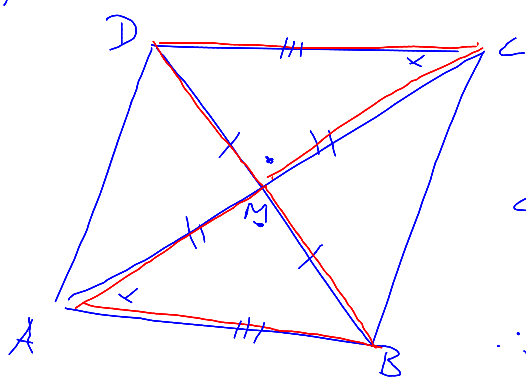
rotation: 180°

reflection: nil

b) yes



9d (M)



AB = CD (matching sides in ≡ △'s)

∠BAM = ∠DCM (matching ∠'s in ≡ △'s)

∴ AB ∥ DC (alternate ∠'s =)

ABCD is ∥gram

(one pair sides = and ∥)

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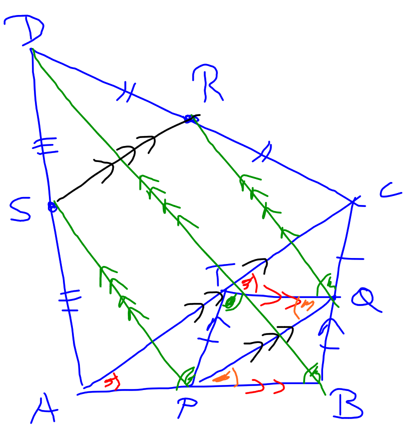

a) $PT = BQ$

$PT // BQ$

opposite side = and //

$\therefore$ PBQT is //gram

$\triangle APT$, $\triangle QPT$, $\triangle PBQ$, $\triangle TQC$

$PT = PT = BQ = QC$ (given) (S)

$\angle TPA = \angle QTP$ (alternate $\angle$'s, $AB // TQ$)

$\angle QTP = \angle PBQ$ (opposite $\angle$'s in //gram)

$\angle PBQ = \angle CQT$ (corresponding $\angle$'s, $PB // TQ$)

$\angle TAP = \angle CTQ$ (corresponding $\angle$'s, $AB // TQ$)

$\triangle ATP \equiv \triangle TCQ$ (AAS)

$\angle TQP = \angle BPQ$ (alternate $\angle$'s, $TQ // PB$)

$\therefore \triangle QTP \equiv \triangle PBQ$ (AAS)

$QT = QT$ (common side)

$\therefore \triangle CTQ \equiv \triangle PTQ$ (SAS)

Thus $\triangle CTQ \equiv \triangle PTQ \equiv \triangle QBP \equiv \triangle ATP$

AP = PB (matching sides in $\equiv$ $\triangle$'s)

ie P is midpoint of AB

c) $\angle PQT = \angle CTQ$ (matching $\angle$'s in $\equiv$ $\triangle$'s)

$\therefore$ AC $\parallel$ PQ (alternate $\angle$'s $=$)

Similarly QR $\parallel$ BD $\parallel$ PS

also RS $\parallel$ AC

Thus PQRS is $\parallel$gram (opposite sides $\parallel$)