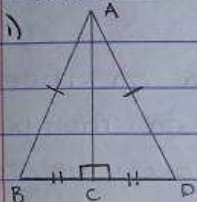
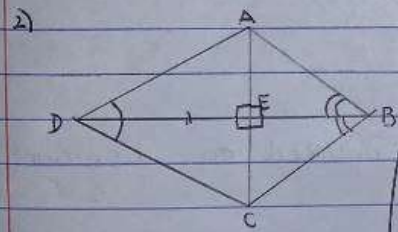


$AE \cong CD$ (opposite sides of rectangle are equal)
 $\angle BAE \cong \angle BCD = 90^\circ$ (rectangle)

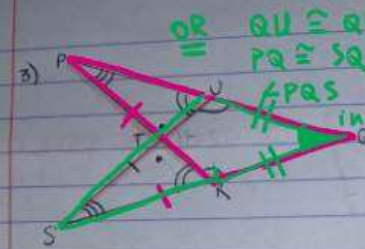
$\angle BED \cong \angle BDE$
 $\angle BDC \cong \angle BEA$ } base angles of isosceles triangles are equal.
 (difference of equal angles are equal (90°))

TASK 1

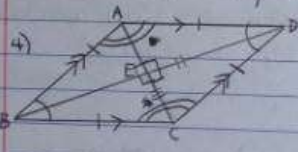
1)  $AD \cong AB$ (hypotenuse) $CD \cong CB$ (another side) OR $\angle ACD \cong \angle ACR = 90^\circ$
 \therefore By RHS. $CD \cong CB$ and AC in common
 $\Delta ACB \cong \Delta ACD$ ← By SAS

2)  $\Delta ADE \cong \Delta CDE$ by ASA
 $\Delta ADB \cong \Delta CDB$ by ASA
 ($\angle ABE \cong \angle CBE$ and $\angle ADE \cong \angle CDE$)

b) DE is shared
 $\therefore \Delta AED \cong \Delta CED$
 ($\angle ADE \cong \angle CDE$)

3)  OR $QU \cong UR$
 $PQ \cong SQ$ $PR = SU$
 $\angle PQS$ $\angle RTU$ is a kite in common
 $\Delta PQR \cong \Delta SRQ$ by SAS
 PROVE $\Delta PQR \cong \Delta SRQ$

$\angle TRQ \cong \angle TUQ$ ✓ (TUQ \cong $\angle TRQ$ since opposite angles in a kite are equal)
 $\angle STR \cong \angle DTU$ AND $\angle SRT \cong \angle PRT$
 $\angle TSR \cong \angle TPU$ ✓
 $\therefore \Delta PQR \cong \Delta SRQ$ by ASA ✓

4)  ABCD is a rhombus

$\Delta CEB \cong \Delta AED$ by ASA (parallel sides on rhombus equal sides on rhombus) (alternate angles are equal)
 $\Delta CDB \cong \Delta ADB$ by SSS OR by ASA OR by SAS - marked on diagram.

$\Delta BAC \cong \Delta DCA$ by RHS OR by SSS OR by SAS OR by ASA

Excellent notation!
