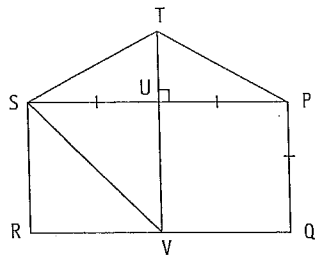
Applications of geometrical properties

TOPIC TEST

Time allowed: 30 minutes **Total marks = 20**

1 PQRS is a rectangle. TV ⊥ SP. U is the point of intersection of TV and SP. PQ = PU = SU

a Show that triangle STP is isosceles. **5 marks**

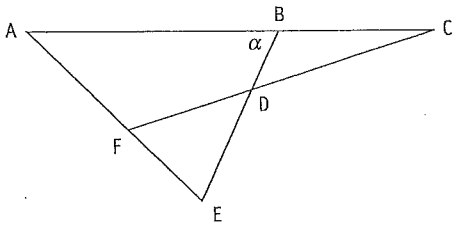


b What type of quadrilateral is SUVR? Briefly justify your answer. **2 marks**

c If ∠TSV = 90° show that ST is perpendicular to TP. **5 marks**

2 In the diagram AB = AE and DF = DE. ∠ABE = α

a Show that ∠FDE = 180° − 2α **4 marks**



b Hence show that ∠BCD = 3α − 180° **4 marks**

Page 197 1 a (show that triangles STU and PTU are congruent, SAS) b square, rectangle with adjacent sides equal c (what is the size of ∠USV?) 2 a (angle sum of triangle FDE) b (∠ABE is an exterior angle of ΔBCD)