

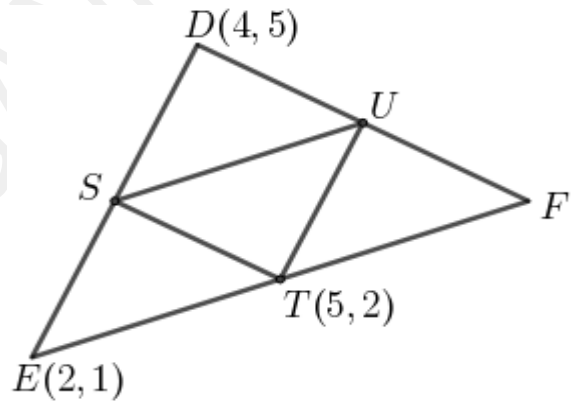
WANDOOR GANITHAM - S S L C UNIT TEST 2021

10.7AE

GEOMETRY AND ALGEBRA

Total Score : 20
Time : 40 minutes

- Consider a line passing through the points $(1, 2)$ and $(5, 7)$
 - What is the slope of the line ?
 - Write down the coordinates of another point on this line ? (2)
- A circle is drawn with the line joining $(1, 7)$ and $(7, 3)$ as diameter .
 - What are the coordinates of centre of the circle ?
 - If one end of another diameter of this circle is $(6, 8)$, what are the coordinates of the other end of it ? (2)
- In the figure S, T, U are the midpoints of the sides of the triangle DEF .
 $D(4, 5)$, $E(2, 1)$, $T(5, 2)$
 - What are the coordinates of S ?
 - What are the coordinates of U ?
 - What are the coordinates of F ? (3)
- Consider three points $P(1, 5)$, $Q(3, 9)$, $R(7, 17)$.
 - What is the slope of the line PQ ?
 - Prove that the points P, Q, R are on the same line ?
 - Prove that the points $(1, 5)$, $(3, 9)$, $(9, 11)$ are the vertices of a triangle ? (3)
- The vertices of a triangle are $A(3, 5)$, $B(9, 13)$, $C(10, 6)$.
 - What is the length of the side AB ?
 - Prove that ABC is an isosceles triangle ?
 - What are the coordinates of the midpoint of AB ?
 - What is the area of the triangle ABC ? (5)



6. In the figure P, Q, R and S are the midpoints of the side of the quadrilateral ABCD

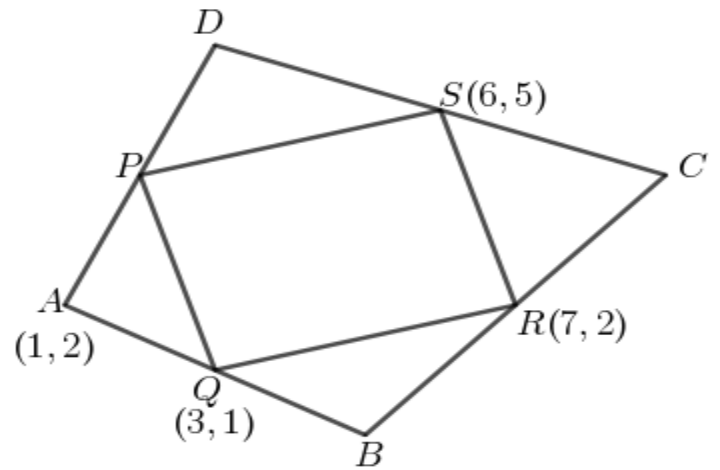
a) What is the most suitable name of the quadrilateral PQRS ?

b) What are the coordinates of P ?

c) What are the coordinates of D ?

d) What are the coordinates of C ?

e) What are the coordinates of B ?



(5)