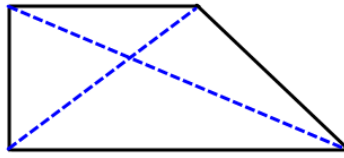


## Geometry CC 2.6 - Trapezoids

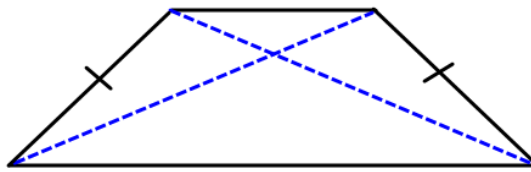
Trapezoid - a quadrilateral with exactly one pair of parallel sides (the parallel sides are called the bases).

- Bases are parallel
- Lower base angle and the upper base angle on the same side are supplementary (same side interior angles).



Isosceles trapezoid – a trapezoid with congruent legs (the non-parallel sides)

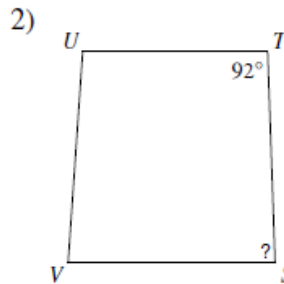
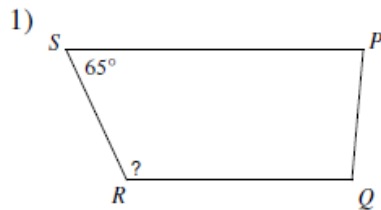
- Congruent diagonals
- Congruent legs (the non-parallel sides)
- Base angles are congruent.
- Opposite angles are supplementary



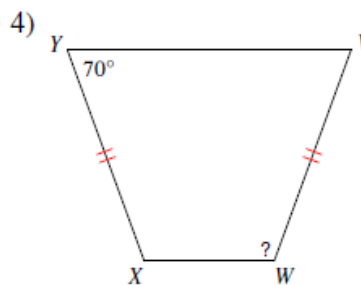
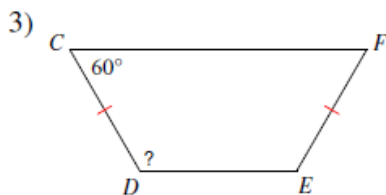
The median of a trapezoid is the segment joining the midpoints of the two non-parallel sides (legs). It is parallel to the bases and its length is one-half the sum of the lengths of the bases.



In the trapezoids below, find the missing angle measure.

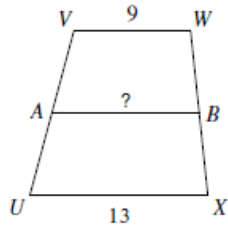


In the trapezoids below, find the measure of ALL angles.

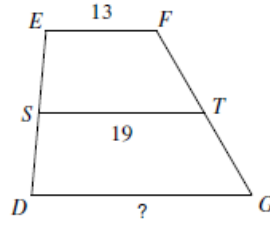


Find the length of the indicated line segment for each of the following trapezoid.

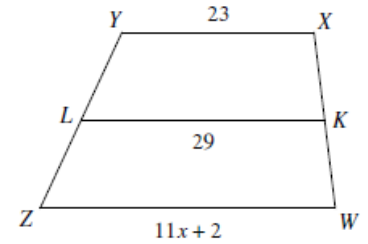
5) Find  $AB$ .



6) Find  $DG$ .

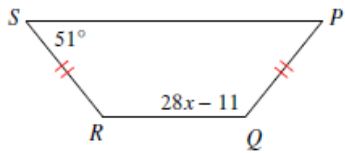


7) Find  $ZW$ .



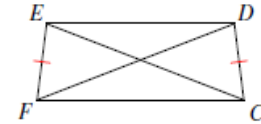
Solve for  $x$ . Each figure is a trapezoid.

8)

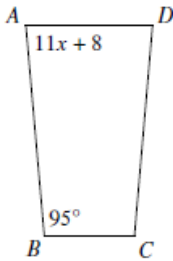


9)

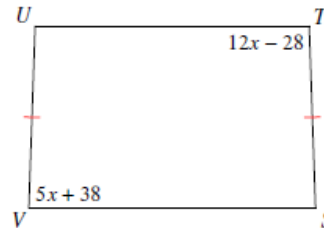
$$\begin{aligned} EC &= 20 \\ FD &= 5x - 10 \end{aligned}$$



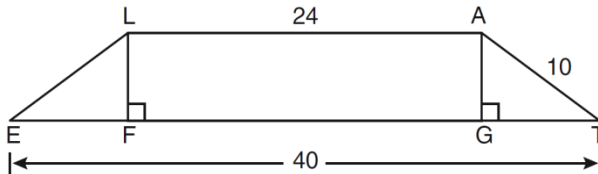
10)



11)



12) In the diagram below,  $LATE$  is an isosceles trapezoid with  $\overline{LE} \cong \overline{AT}$ ,  $LA = 24$ ,  $ET = 40$ , and  $AT = 10$ . Altitudes  $\overline{LF}$  and  $\overline{AG}$  are drawn. What is the length of  $\overline{LF}$ ?



13) In the diagram below of isosceles trapezoid  $ABCD$ ,  $AB = CD = 25$ ,  $AD = 26$ , and  $BC = 12$ . What is the length of an altitude of the trapezoid?

