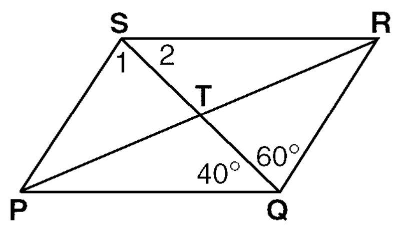
Name: ____

CC Geometry

Trapezoid and Parallelogram Properties

Questions 1 and 2 refer to the following:

In the diagram below, PQRS is a parallelogram.



1) Complete the statement, m∠1 = ?.

A) 100° C) 80°

B) 40° D) 60°

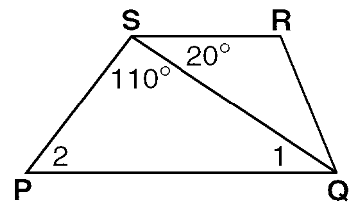
2) Complete the statement, $\overline{PT} \cong$?.

A) $\overline{RQ}$ C) $\overline{TS}$

B) $\overline{RT}$ D) $\overline{TQ}$

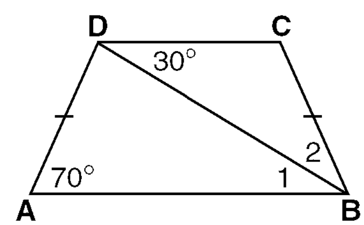
3) The measure of one angle of a parallelogram is 50°. What are the measures of the other angles?

4) In the accompanying diagram, PQRS is a trapezoid with $\overline{PQ} \parallel \overline{SR}$.



Find m∠1 and m∠2.

5) In the accompanying diagram, ABCD is an isosceles trapezoid with $\overline{AB} \parallel \overline{CD}$ and $\overline{AD} \cong \overline{BC}$.



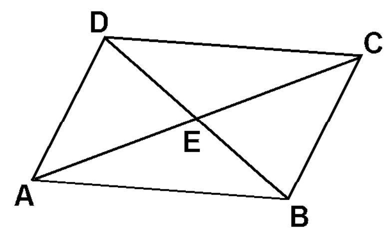
Find m∠1 and m∠2.

6) In parallelogram ABCD, AB = $5x - 4$ and CD = $2x + 14$. Find the value of x.

7) In parallelogram ABCD, $m\angle B = (4x + 15)^\circ$ and $m\angle D = (6x - 27)^\circ$. Find $m\angle C$.

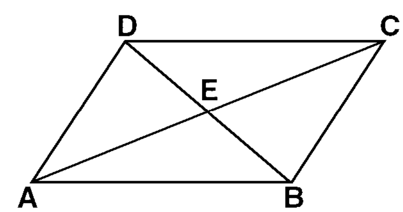
8) In parallelogram ABCD, $m\angle A = x^\circ$ and $m\angle B = (2x - 30)^\circ$. Find the value of x.

9) In the accompanying diagram of parallelogram ABCD, diagonals $\overline{AC}$ and $\overline{DB}$ intersect at E, AE = $3x - 4$, and EC = $x + 12$.



What is the value of x?

10) In parallelogram ABCD below, diagonals $\overline{AC}$ and $\overline{BD}$ intersect at E.



If AC = $4x + 6$ and AE = $3x - 1$, find the value of x.

1) D 2) B

3) $50°, 130°, 130°$

4) $m\angle 1 = 20°, m\angle 2 = 50°$

5) $m\angle 1 = 30°, m\angle 2 = 40°$

6) 6

7) $81°$

8) 70

9) 8

10) 4