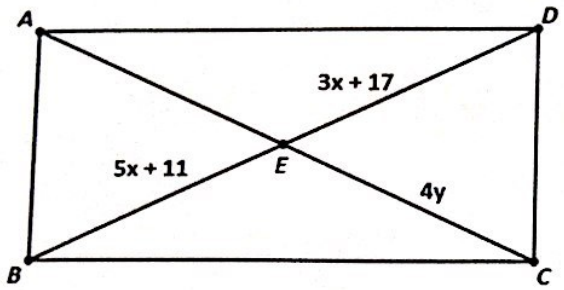
EOCT Review – Properties of Special Quadrilaterals Practice

1. In rectangle ABCD, solve for x and y. What property of a rectangle will you use to solve this problem?



Property: Diagonals of a rectangular are congruent and bisect each other.

Equation: $5x+11=3x+17$

$2x=6$

$x=3$

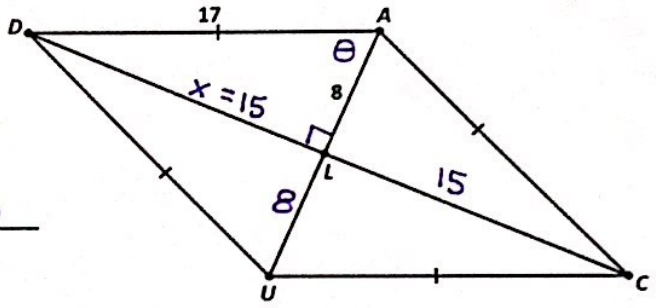
$4y=26$

$y=6.5$

x = 3 y = 6.5

2. What type of quadrilateral is DACU? Explain why.

Rhombus. All sides ≅.



Find the following lengths:

LU = 8 CL = 15 UA = 16

$x^2+8^2=17^2$

$x^2=225$

$x=15$

Find the following angle measures:

$m\angle DLU$ = 90° because diagonals of a rhombus are perpendicular.

$m\angle DAL$ = 61.9° (*hint:* Use an inverse trig ratio to solve.)

$m\angle CAL$ = 61.9° because diagonals of a rhombus bisect vertex angles

$m\angle ADL$ = 28.1° because two acute angles of right △ are complementary

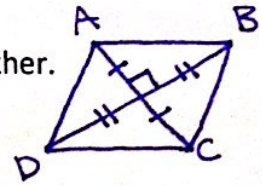
$\tan\theta = \frac{15}{8}$

$\theta = 61.9°$

3. Classify each quadrilateral based on the information given.

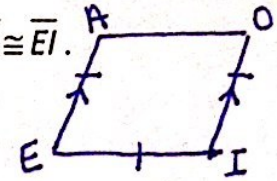
A. In quadrilateral ABCD, $\overline{AC}$ and $\overline{BD}$ are the perpendicular bisectors of each other.

Rhombus



B. In quadrilateral EAOI, $\overline{EA} \parallel \overline{OI}$ and $\overline{EA} \cong \overline{OI}$ and $\overline{EA} \cong \overline{EI}$.

Rhombus



C. In parallelogram MNBV, $\overline{NB} \perp \overline{VB}$.

Rectangle