

Algebra 2

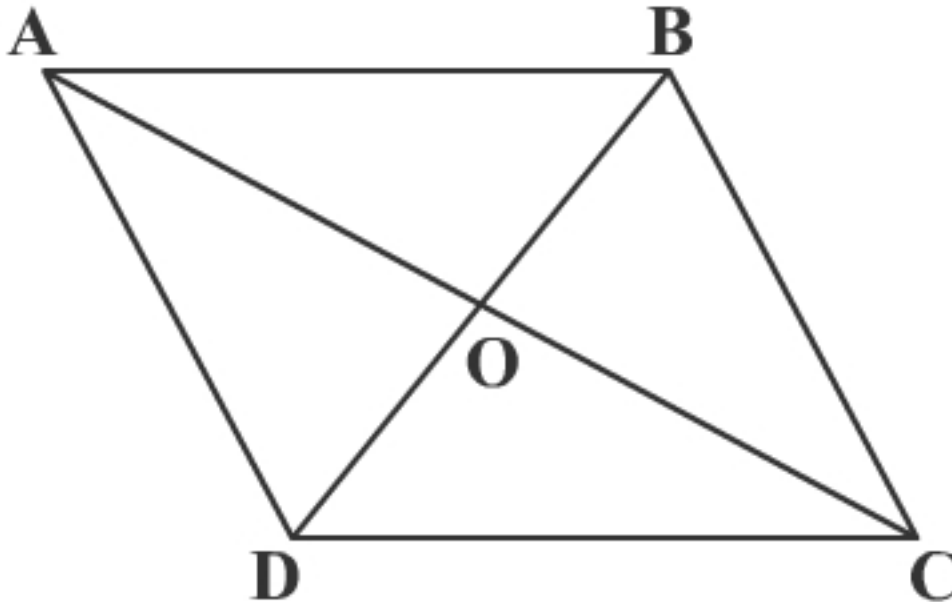
Writing Assignment: Algebra of Quadrilaterals

Each problem is worth 5 Points

Total Points: 50

Solve each system of equations. Show your work.

1. Use the following image for problems (a) – (f). ABCD is a parallelogram.



(a) Angle DAB measures $(4x - 2)^\circ$ and angle BCD measures 47° . Find x .

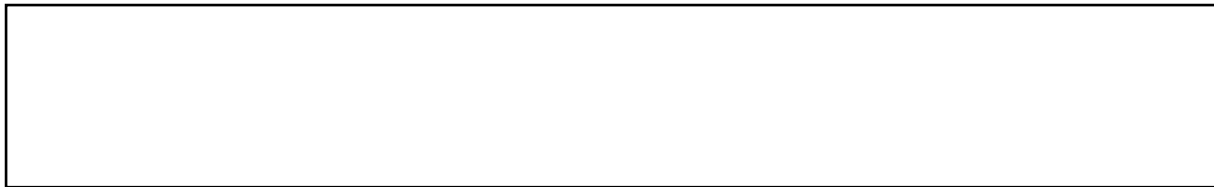
(b) Angle ADC measures $(3x)^\circ$ and angle BCD measures $(5x)^\circ$. Find x .

(c) Side $AB = 3x - 5$ and side $DC = x + 10$. Find x .


(d) Side $AD = 4x$ and side $BC = 3x + 20$. Find x .



(e) Angle ABC measures 40° and angle BCD measures $(2x - 1)^\circ$. Find x .



(f) If $DO = 3x - 2$ and $OB = 34$, find x .



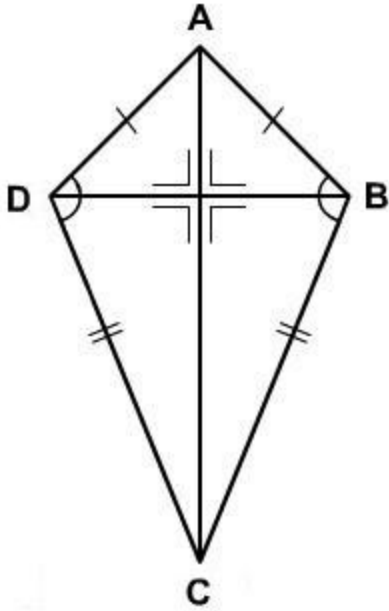
2. $ABCD$ is a rectangle. Angle A measures $(4x - 15)^\circ$. Find x .



3. $ABCD$ is an isosceles trapezoid with base \overline{DC} . If angle D measures 65° and angle C measures $(5x)^\circ$, find x .



4. ABCD is a kite. Answer (a) and (b) using the following image.



(a) Side $DA = 3x - 8$ and side $AB = 28$. Find x .

(b) Find the lengths of side DA , given the information in (a).