

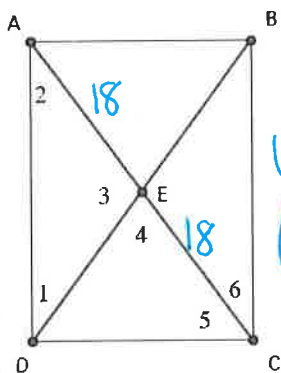
PROPERTIES OF RECTANGLES NOTES

Properties of Rectangles

- Opposite sides in a rectangle are parallel and congruent.
- All four angles are right angles.
- Opposite angles in rectangle are congruent.
- Consecutive angles in a rectangle are supplementary.
- The diagonals of a rectangle are congruent.
- The diagonals of a rectangle bisect each other.
- Each diagonal separates a rectangle into two sets of congruent isosceles triangles.

Use the properties of quadrilaterals to find x.

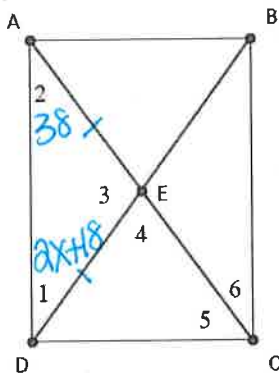
1. $AE = 18, AC = 6x$



$$6x = 36$$

$$x = 6$$

2. $m\angle 2 = 38, m\angle 1 = 2x + 18$

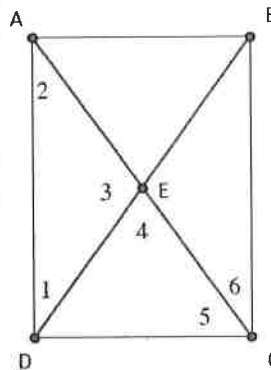


$$38 = 2x + 18$$

$$20 = 2x$$

$$x = 10$$

3. $m\angle 5 = x, m\angle 6 = 2x - 30$



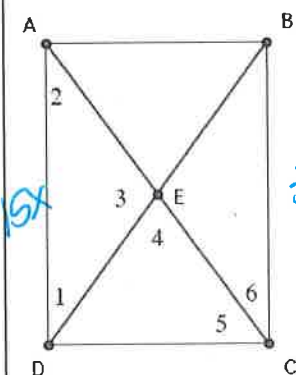
$$x + 2x - 30 = 90$$

$$3x - 30 = 90$$

$$3x = 120$$

$$x = 40$$

4. $AD = 15x, BC = 3x + 144$

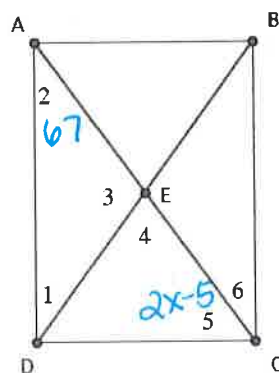


$$15x = 3x + 144$$

$$12x = 144$$

$$x = 12$$

5. $m\angle 2 = 67, m\angle 5 = 2x - 5$



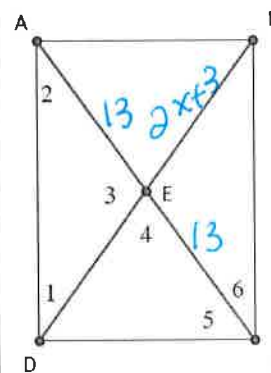
$$67 + 2x - 5 = 90$$

$$2x - 5 = 23$$

$$2x = 28$$

$$x = 14$$

6. $AC = 26, BE = 2x + 3$



$$2x + 3 = 13$$

$$2x = 10$$

$$x = 5$$