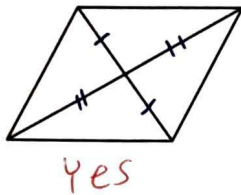
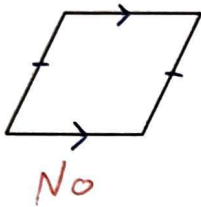
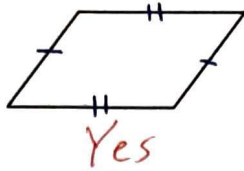
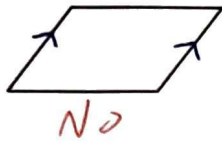


1. Are the following parallelograms?



2. Is the following figure a rectangle, a rhombus, or a square? List all the possible options. A(-15,4) B(-13,4) C(-13,-3) D(-15,-3)

$$AB = \frac{4-4}{-13+15} = \frac{0}{2} = 0 \quad \sqrt{0^2+2^2} = 2$$

$$BC = \frac{-3-4}{-13+13} = \frac{-7}{0} \text{ und } \sqrt{7^2+0^2} = 7$$

$$CD = \frac{-3+3}{-15+13} = \frac{0}{-2} = 0 \quad \sqrt{0^2+2^2} = 2$$

$$AD = \frac{-3-4}{-15+15} = \frac{-7}{0} \text{ und } \sqrt{7^2+0^2} = 7$$

Rect.

3. List all the possible choices

a) Only 2 sides parallel

Trap + iso Trap

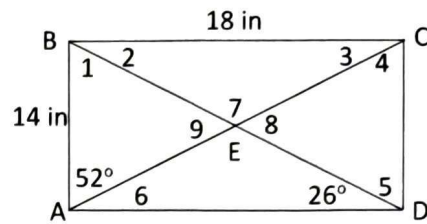
b) Diagonals bisect each other

Parallelogram, Rhombus, Rectangle, Square

c) consecutive sides congruent

Kite, Rhombus, Square

4. Fill in all the missing pieces of information for the rectangle.



$$\angle 1 = 64^\circ$$

$$\angle 2 = 26^\circ$$

$$\angle 3 = 38^\circ$$

$$\angle 4 = 52^\circ$$

$$\angle 5 = 64^\circ$$

$$\angle 6 = 38^\circ$$

$$\angle 7 = 116^\circ$$

$$\angle 8 = 64^\circ$$

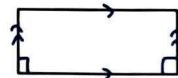
$$\angle AED = 116^\circ$$

$$\angle 9 = 64^\circ$$

$$\overline{AD} = 18 \text{ in}$$

$$\overline{CD} = 14 \text{ in}$$

5. Give the most specific name for the following figures.



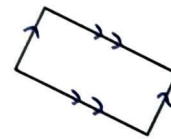
Rectangle



square

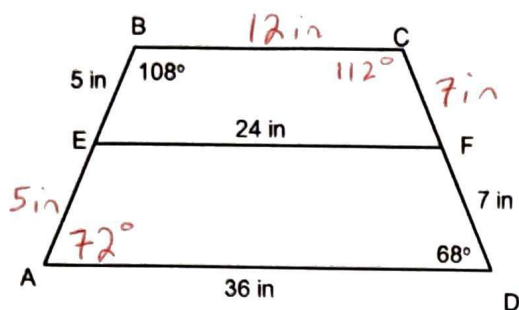


Rhombus



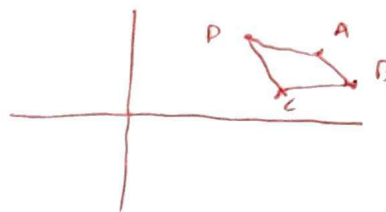
Parallelogram

6. If \overline{EF} is the midsegment. Find the following. $\angle A, \angle C, \overline{BC}, \overline{AE}, \overline{CF}, \overline{CD}$



8. Find the length of the midsegment of the following trapezoid.

A(18,6) B(20,5) C(18,2) D(12,5)



$$\text{mid}_{AD} = (15, 5.5)$$

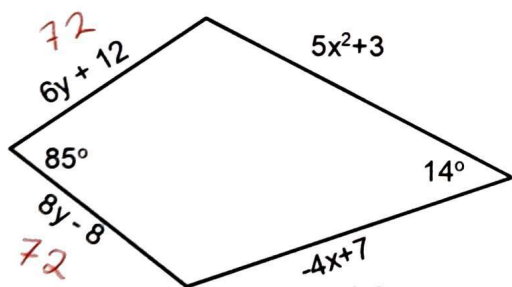
$$\text{mid}_{BC} = (19, 3.5)$$

$$d = \sqrt{4^2 + 2^2}$$

$$\sqrt{20}$$

$$2\sqrt{5} \text{ or } 4.47$$

7. Find the missing angles and the perimeter for the following figure.



$$6y + 12 = 8y - 8$$

$$-6y + 8 \quad -6y + 8$$

$$\frac{20}{2} = \frac{2y}{2}$$

$$10 = y$$

$$4.68$$

or

$$12.52$$

$$5x^2 + 3 = -4x + 7$$

$$5x^2 + 4x - 4 = 0$$

$$\frac{-4 \pm \sqrt{4^2 - 4(5)(-4)}}{2(5)}$$

$$\frac{-4 \pm \sqrt{96}}{10}$$

$$x = 0.58, -1.38$$