

A
$$7\frac{1}{3}$$

B 8 **D** 66

$$3x = 3k$$

7. ABCD is a rectangle. If AB = 7x - 6 and CD = 5x + 30, find the value of x.

A
$$5\frac{1}{3}$$
 B 12 **C** 13 **D** 18
 $7x-6 = 5x+30$
 $2x = 36$



8. Which of the following is true for all rectangles?

A The diagonals are perpendicular.

B The consecutive angles are supplementary.

C The opposite sides are supplementary.

D The opposite angles are complementary.

9. *ABCD* is a rectangle with B(-7, 3), C(5, 3), and D(5, -8). Find the coordinates of *A*.

A
$$A(-8, -7)$$
 B $A(-7, -8)$ **C** $A(-5, -3)$ **D** $A(-8, -5)$





14. *ABCD* is a parallelogram with coordinates A(4, 2), B(3, -1), C(-1, -1), and D(-1, 2). To prove that *ABCD* is a rhombus, you would plot the parallelogram on a coordinate plane and then find which of the following?

A measures of the angles B lengths of the diagonals Oslopes of the diagonals if opp. rec. then diagonals \bot D midpoints of the diagonals **15**. Find the coordinates of the intersection of the diagonals of parallelogram *XYZW* with vertices



a) a) (Yes <or> No (circle one) Property/Explanation: <u>Both poics</u> of opp. sides \cong b) b) Yes <or> No (circle one) Property/Explanation: <u>Only one</u> <u>side 11</u>

17. For rectangle *ABCD*, find the value of *x*.



$$6x + 20 + 3x - 2 = 90$$

 $9x + 18 = 90$
 $9x = 72$
 $1x = 8$

18. For kite *ABCD*, if
$$RA = 12$$
, and $BD = 18$, find *AD*



$$12^{2} + 9^{2} = AD^{2}$$

$$144 + 81 = AD^{2}$$

$$\sqrt{225} = AD^{2}$$

$$15 = AD^{2}$$

19. In isosceles trapezoid *ABCD*, AE = 3x - 1, EC = x + 5, and BD = 20. Find the value of *x*.

$$3\chi - 1 + x + 5 = 20$$

 $H_{x} + 4 = -20$
 $H_{x} = 16$
 $x = 4$



- 24. An isosceles trapezoid is ________ a trapezoid.
- 25. The diagonals of a kite are <u>perce</u> congruent.
- 26. A trapezoid is <u>never</u> a parallelogram.
- 27. A parallelogram is <u>Sometimes</u> a rectangle.