

Complete the table:

	Parallelogram	Rhombus	Rectangle	Square
1. The diagonals are perpendicular.		✓		✓
2. The figure has four right angles.			✓	✓
3. The opposite sides are congruent.	✓	✓	✓	✓
4. The diagonals are congruent.			✓	✓
5. The figure has four congruent sides.		✓		✓
6. The diagonals bisect each other.	✓	✓	✓	✓
7. The consecutive angles are supplementary.	✓	✓	✓	✓
8. Each diagonal bisects a pair of opposite angles.		✓		✓
9. The figure has exactly four lines of symmetry.				✓
10. The figure is a rectangle.			✓	✓

11. Draw a Venn diagram that shows the relationship between parallelograms, rhombi, squares, and rectangles. *See next page*

Determine whether the statements are always, sometimes, or never true.

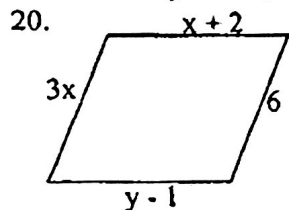
S 12. The diagonals of a rectangle are perpendicular. A 16. A square is a rectangle.

A 13. Consecutive sides of a rhombus are congruent. S 17. A rhombus is a square.

S 14. A parallelogram has at least one right angle. A 18. A rectangle is a parallelogram.

S 15. The diagonals of a parallelogram are congruent. S 19. A rectangle is a rhombus.

What value of x and y will make the polygon a parallelogram?



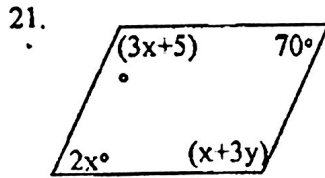
$$3x = 6$$

$$x = 2$$

$$x + 2 = y - 1$$

$$4 = y - 1$$

$$5 = y$$



$$2x = 70$$

$$x = 35$$

$$3x + 5 = x + 3y$$

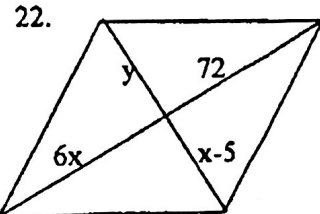
$$105 + 5 = 35 + 3y$$

$$110 = 35 + 3y$$

$$75 = 3y$$

$$25 = y$$

10



$$6x = 72$$

$$x = 12$$

$$x - 5 = y$$

$$7 = y$$

Venn Diagram

