

1. quadrilateral - 4 sided polygon
2. a parallelogram is a quadrilateral with both pairs of opposite sides parallel.
3. congruent
4. bisect
5.

$$x = 20^\circ$$

$$w = 100^\circ$$

$$y = 60^\circ$$

$$\cancel{z} = 20^\circ$$

6. *Ways we can prove a quadrilateral is a parallelogram:*

1. *Show that both pairs of opposite sides are parallel.*

2. *Show that both pairs of opposite sides are congruent.*

3. *Show that one pair of opposite sides are both congruent and parallel.*

4. *Show that both pairs of opposite angles are congruent.*

5. *Show that the diagonals bisect each other.*

7. *Yes it is a parallelogram*

if both pairs of opposite sides of a quadrilateral are congruent, then the quadrilateral is a parallelogram.

8. *Yes it is a parallelogram*

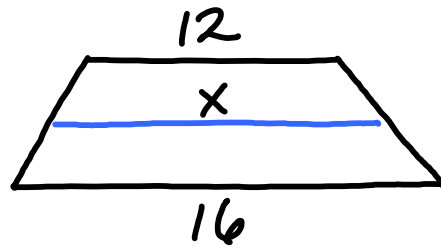
if one pair of opposite sides of a quadrilateral are both congruent and parallel, then the quadrilateral is a parallelogram.

9. False; the base sides are parallel

10. median

11. Congruent

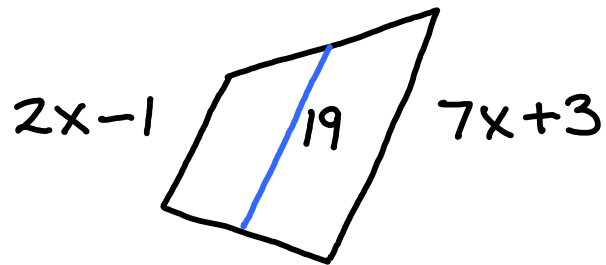
12. $x = 14$



$$x = \frac{1}{2} (12 + 16) = \frac{1}{2} (28)$$

$$x = 14$$

13. $x=4$



$$19 = \frac{1}{2}(2x-1 + 7x+3)$$

$$19 = \frac{1}{2}(9x+2)$$

$$38 = 9x+2$$

$$36 = 9x$$

$$x=4$$

14. A **rhombus** is a quadrilateral with four congruent sides

15. congruent

16. perpendicular

17. rhombus

If two consecutive sides of a parallelogram are congruent, then the parallelogram is a rhombus

18. $MP = \frac{1}{2} AC$

19. midpoint

20. Yes, the below theorem states:

if three parallel lines cut off congruent segments

on one transversal, then they cut off congruent segments on every transversal

