

1. Skew lines never intersect because they are not in the same plane. Parallel lines never intersect and these lines are in the same plane (coplanar).
2. Yes
3. $q \parallel t$
4. Yes, if one can show two lines are parallel to a third line - then it's proved that the lines are parallel to each other.
5. line r

6. $\angle 1$ and $\angle 4$ = vertical angles
 $\angle 3$ and $\angle 6$ = alternate interior angles
 $\angle 3$ and $\angle 5$ = same-side interior angles
 $\angle 2$ and $\angle 6$ = corresponding angles
 $\angle 5$ and $\angle 8$ = vertical angles
 $\angle 5$ and $\angle 6$ = supplementary angles

7. congruent

8. supplementary

9. parallel

10. $x = 30$

alternate interior angles are =

$$7(x+3) = 5x + 81$$

$$7x + 21 = 5x + 81$$

$$2x = 60$$

$$x = 30$$

- 11.
1. corresponding \angle 's are \cong .
 2. alternate - interior \angle 's are \cong .
 3. same-side interior \angle 's are supplementary.
 4. both lines are in a plane and perpendicular to a third line.
 5. both lines are parallel to a third line.

12. $x=11$ same-side interior \angle 's must be supplementary (sum 180°)

$$\begin{aligned}3x + (12x + 15) &= 180 \\15x + 15 &= 180 \\15x &= 165 \\x &= 11\end{aligned}$$

13. pentagon

14. six sides

15. polygon with equal sides and angles.

16. 10 sides

$$S = 180(n-2)$$

$n = \# \text{ sides}$

$$1440 = 180(n-2)$$

$$1440 = 180n - 360$$

$$1800 = 180n$$

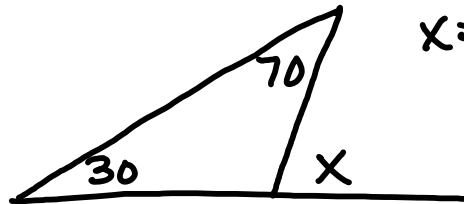
$$n = 10$$

17. no sides are equal

18. isosceles

19. acute or scalene

20 $x = 100^\circ$



$$x = 30 + 70$$

$$x = 100$$