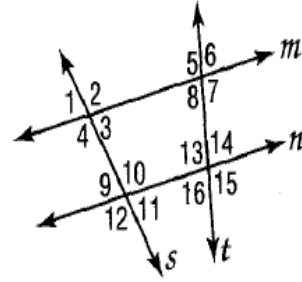


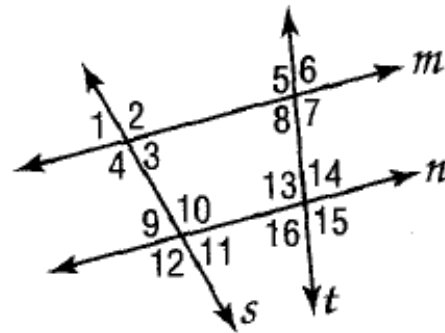
Classify each pair of angles as alternate interior, alternate exterior, corresponding, consecutive interior, vertical, or a linear pair.

1. $\angle 2$ and $\angle 12$
2. $\angle 3$ and $\angle 5$
3. $\angle 6$ and $\angle 7$
4. $\angle 2$ and $\angle 10$
5. $\angle 7$ and $\angle 15$
6. $\angle 13$ and $\angle 10$
7. $\angle 5$ and $\angle 7$



8. Given: $m \parallel n$, $m\angle 3 = 67^\circ$, and $m\angle 8 = 86^\circ$, find the measure of the remaining angles.

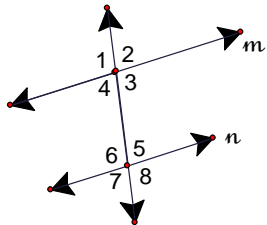
- | | |
|----------------------|----------------------|
| $m\angle 1 =$ _____ | $m\angle 2 =$ _____ |
| $m\angle 4 =$ _____ | $m\angle 5 =$ _____ |
| $m\angle 6 =$ _____ | $m\angle 7 =$ _____ |
| $m\angle 9 =$ _____ | $m\angle 10 =$ _____ |
| $m\angle 11 =$ _____ | $m\angle 12 =$ _____ |
| $m\angle 13 =$ _____ | $m\angle 14 =$ _____ |
| $m\angle 15 =$ _____ | $m\angle 16 =$ _____ |



9. Find x and y given $m \parallel n$, $m\angle 4 = 6x - 5^\circ$, $m\angle 5 = 5x + 8^\circ$, and $m\angle 6 = 3y - 10^\circ$

Equation to find x :

Equation to find y :



$x =$ _____

$y =$ _____

10. Find the slope of each line that contains the given points.

- a. V (-10, -4) and W (5, 5) b. A (-2, 9) and C (2, -15) c. G (-6, 14) and L (-3, 9)

For problems 11-13, Determine if \overline{CS} and \overline{KP} are parallel, perpendicular, or neither.

11. C (1, -12), S (5, 4), K (1, 5) and P (4, -7)

slope of $\overline{CS} =$

slope of $\overline{KP} =$

Circle one: Parallel, Perpendicular, Neither

12. **C (-5, 6), S (-3, 2), K (-2, 10) and P (1, 4)**
slope of \overline{CS} = slope of \overline{KP} =

Circle one: Parallel, Perpendicular, Neither

13. **C (-6, -7), S (-3, -5), K (7, 3) and P (3, 9)**
slope of \overline{CS} = slope of \overline{KP} =

Circle one: Parallel, Perpendicular, Neither

For problems 14-19, write the equation of the line in slope intercept form:

14. Write the equation of the line with a slope of $-\frac{1}{2}$ and contains point (2, -2).

15. A line has a slope of -10 and a y intercept of 4. Write the equation of the line.

16. A line has a slope of $\frac{1}{2}$ and passes through the point (4, -6)

17. A line perpendicular to $y = \frac{2}{5}x - 7$ and passes through (-4,1).

a) slope of the line

b) Equation of the line

18. A line passes through the points (-7, 9) and (6, -4)

a) slope of the line

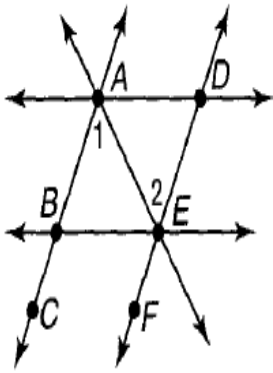
b) Equation of the line

19. A line parallel to $y = \frac{2}{5}x - 7$ and passes through (-15,8)

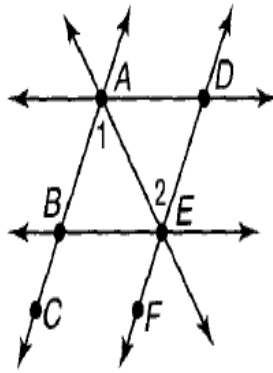
a) slope of the line

b) Equation of the line

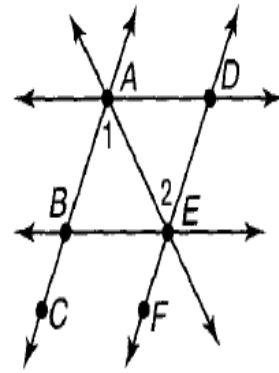
For #20-22, Determine which lines (if any) are parallel and **why**.



20. Given: $\angle 1 \cong \angle 2$
 _____ \parallel _____ because
 if _____
 angles are _____
 then the lines are parallel.

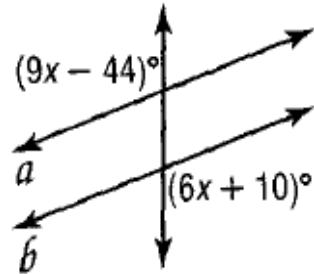


21. Given: $\angle DAB \cong \angle EBC$
 _____ \parallel _____ because
 if _____
 angles are _____
 then the lines are parallel.

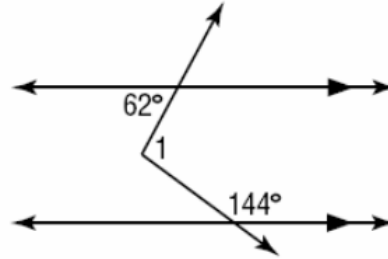


22. Given:
 $m\angle ADE + m\angle BED = 180^\circ$
 _____ \parallel _____ because
 if _____
 angles are _____
 then the lines are parallel.

23. Find x so that $a \parallel b$.



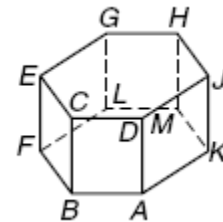
24. Find the measure of Angle 1.



25. Coplanar lines that never intersect are called _____.

26. Non-coplanar lines that never intersect are called _____.

27. Using the diagram to the right, given an example of
 A) Parallel lines



B) Skew lines

28. The sum of two complementary angles is _____.

29. The sum of two supplementary angles is _____.

30. Name the vertex and sides of $\angle RUN$:

Vertex: _____ Sides: _____ and _____