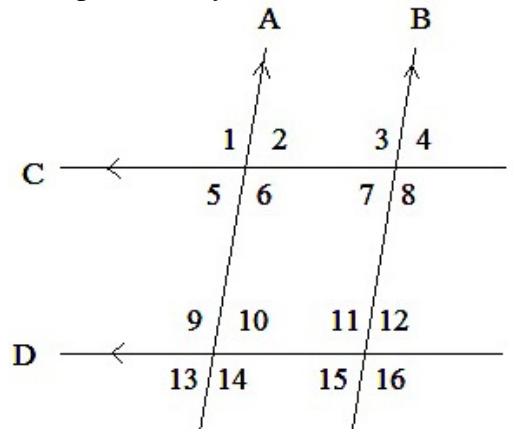


Use the image to find the measure of the following angles ($A \parallel B, C \parallel D$). Explain how you know.



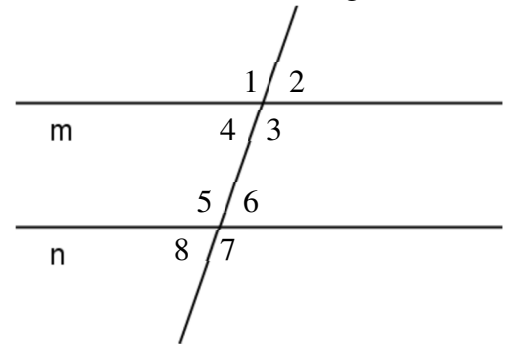
1. If $m\angle 1 = 130^\circ$, find $m\angle 15 =$ _____. Why?
2. If $m\angle 4 = 47^\circ$, find $m\angle 11 =$ _____. Why?
3. If $m\angle 14 = 123^\circ$, find $m\angle 7 =$ _____. Why?
4. If $m\angle 13 = 116^\circ$, find $m\angle 12 =$ _____. Why?
5. If $m\angle 12 = 66^\circ$, find $m\angle 6 =$ _____. Why?

6. If $m\angle 9 = 3x - 15^\circ$ and $m\angle 10 = 12x^\circ$.
 - a. Find x
 - b. Find $m\angle 9$
 - c. Find $m\angle 10$

7. If $m\angle 14 = 4y + 9$ and $m\angle 8 = 2y + 27$.
 - a. Find y
 - b. Find $m\angle 8$
 - c. Find $m\angle 14$

Use the image to the right. Explain how lines m and n are or are **NOT** parallel based on the following.

8. If $r = 30$ and $m\angle 4 = 4r - 50$ and $m\angle 5 = 3r + 20$



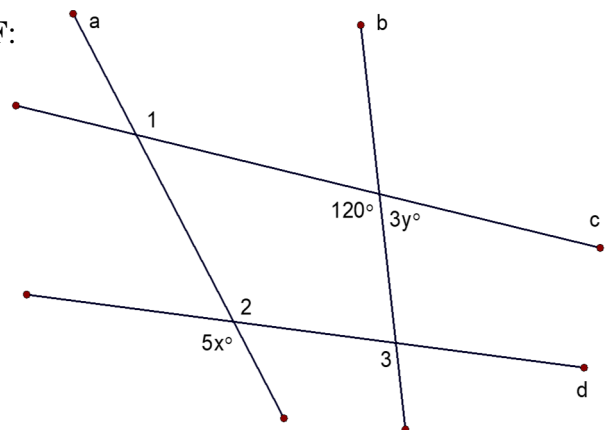
9. If $z = 30$ and $m\angle 7 = 5z - 20$ and $m\angle 5 = 2z + 70$.

Complete the following statements:

10. Angles A and B are complementary. **If** $m\angle A$ is 49° , **then** the measure of $\angle B$ is _____
11. Angles Q and R are supplementary. **If** $m\angle Q$ is 127° , **then** the measure of $\angle R$ is _____

Tell which lines (if any) are parallel in the following picture **IF**:

12. $m\angle 1 = m\angle 2$ _____
13. $m\angle 2 = m\angle 3$ _____
14. $m\angle 1 = m\angle 3$ _____
15. Find x and y if $a \parallel b$ and $c \parallel d$.
 $x =$ _____ $y =$ _____




Perform the constructions using a compass and straight edge only. Show all necessary markings.

16. Construct a line segment congruent to the given line.



17. Construct a line segment whose length is equal to the sum/difference of the given line segments.

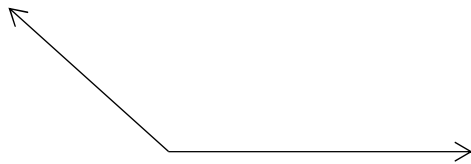
	SUM	DIFFERENCE
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18. Construct an angle congruent to the given angle.



19. Construct a mirror image of the angle above.

20. Construct the angle onto the given line segment. List your steps for how you constructed the angle.



21. Construct a parallel line through the given point.



22. Construct a line parallel to the given line segment.

