7R Parallel Lines Review

Name: _____ Per: _____

SHOW YOUR WORK FOR FULL CREDIT. NO WORK, NO CREDIT. NO WORK IN PEN.

For questions 1-4 **use the angle measures** $\angle A = 30°, \angle B = 120°, \angle C = 60°,$ **and** $\angle D = 150°.$ Match each statement with the proper term, listed on the right. Each answer may be used more than once.

1. $\angle A$ and $\angle B$ are called _____

2. $\angle A$ and $\angle C$ are called _____

3. $\angle A$ and $\angle D$ are called _____

4. $\angle B$ and $\angle C$ are called _____

A. Complementary Angles

B. Congruent Angles

C. Supplementary Angles

D. None of these

For questions 5-11, use **the image** to find the measure of the following angles ($A||B$ **and** $C||D$).
Explain your reasoning.

5. If $\angle 1 = 130°$, find $\angle 5 =$
   Explain
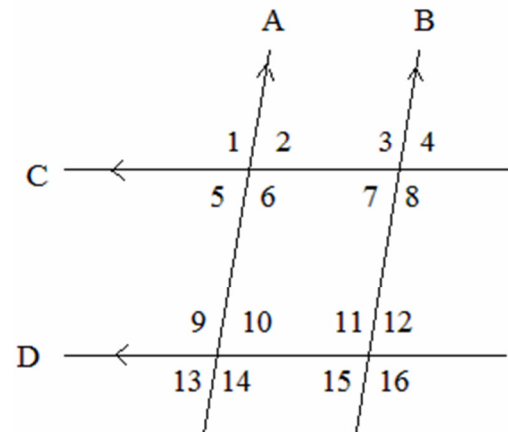
6. If $\angle 4 = 47°$, find $\angle 12 =$
   Explain

7. If $\angle 14 = 123°$, find $\angle 9$.
   Explain

8. If $\angle 13 = 116°$, find $\angle 1$.
   Explain

9. If $\angle 12 = 66°$, find $\angle 6$.
   Explain

10. If $\angle 9 = (3x - 15)°$ and $\angle 10 = (12x)°$,
    a. Name the relationship between the 2 angles. _____
    b. Set up the equation to find the unknown. _____
    c. Find x

    d. Find $\angle 9$

    e. Find $\angle 10$

11. If $\angle 14 = (4y + 9)°$ and $\angle 8 = (2y + 27)°$.
    a. Name the relationship between the 2 angles. _____
    b. Set up the equation to find the unknown. _____
    c. Find y

   d. Find $\angle 8$

    e. Find $\angle 14$

12. If $\angle 13 = 2(y + 5)°$ and $\angle 3 = (3y)°$.
    a. Name the relationship between the 2 angles. _____
    b. Set up the equation to find the unknown. _____
    c. Find y

    d. Find $\angle 8$

    e. Find $\angle 14$

13. If $\angle 3 = (3y + 7)°$ and $\angle 16 = 4(y - 9)°$.
    a. Name the relationship between the 2 angles. _____
    b. Set up the equation to find the unknown. _____
    c. Find y

    d. Find $\angle 3$
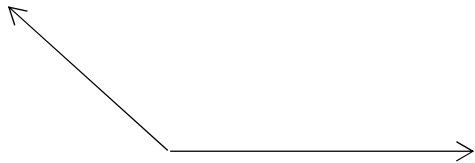
    e. Find $\angle 16$

14. Construct an angle **congruent** to the given angle.
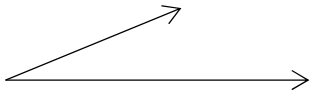
15. Construct a **MIRROR** image of the following angle.
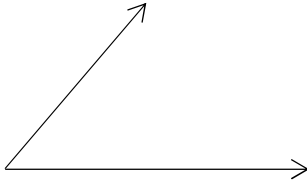
16. Construct the angle onto the given line segment. List your steps for how you constructed the angle.

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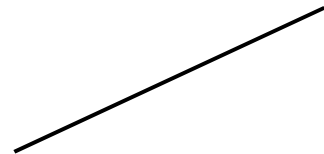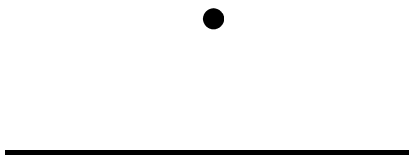_____

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Perform the following constructions using a **compass and straight edge only**. Show all necessary markings.
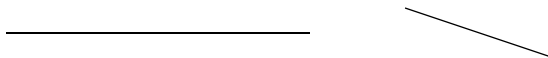
17. Construct a parallel line through the given point.

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

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

19. Construct a line segment whose length is equal to the **SUM** of the given line segments.

20. Construct a line segment whose length is equal to the **DIFFERENCE** of the given line segments.