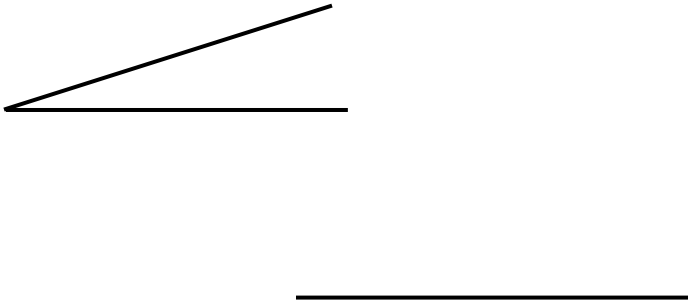
# 7D Constructing Parallel Lines

Name: _____Per: _____

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

**<u>Construct</u> the angle onto the line segment given. List your steps to how you constructed your angle.**

1.



2.

_____

_____

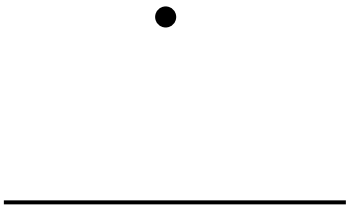
_____

_____

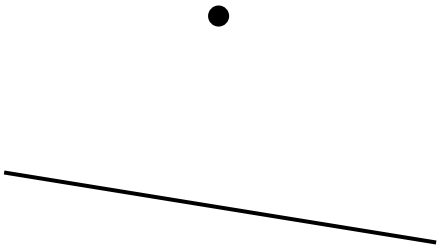
_____

**Given the segment and point, <u>construct</u> a parallel line passing through the point. Show markings.**

3.



4.



**<u>Construct</u> a parallel line to the given segment. Show markings.**

5.

6.

7. **Explain your steps and how you know that your lines are parallel.**_____

_____

_____

8. **Find all missing angle measures for the figure below. Explain how you know.**

a. $m\angle A =$ _____ °
_____

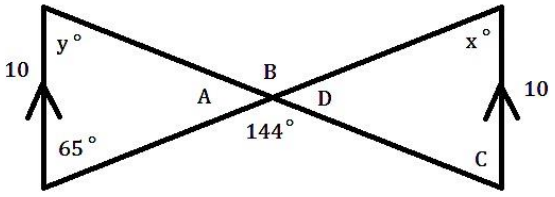
b. $m\angle B =$ _____ °
_____

c. $m\angle C =$ _____ °
_____

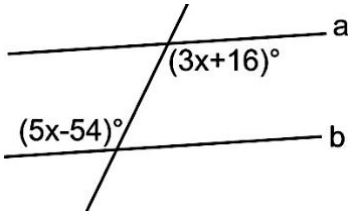
d. $m\angle D =$ _____ °
_____

e. $x =$ _____ °
_____

f. $y =$ _____ °
_____



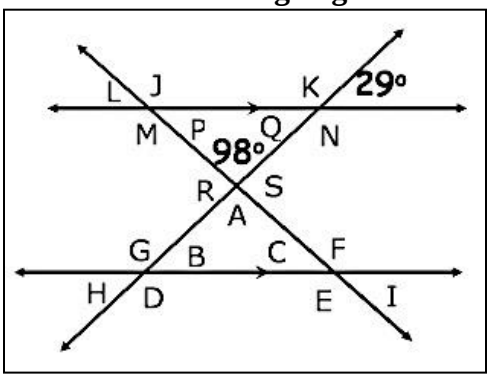

9. **Using the image to the right and $a \parallel b$. Find the value of x.**




a. x = _____

b. What is the relationship between the two angles? _____

10. **Find the missing angles from the image below.**




$\angle A =$ _____ $\angle B =$ _____ $\angle C =$ _____ $\angle D =$ _____ $\angle E =$ _____

$\angle F =$ _____ $\angle G =$ _____ $\angle H =$ _____ $\angle I =$ _____ $\angle J =$ _____

$\angle K =$ _____ $\angle L =$ _____ $\angle M =$ _____ $\angle N =$ _____ $\angle S =$ _____

$\angle P =$ _____ $\angle Q =$ _____ $\angle R =$ _____

11. **Use the following image to answer the questions. $AB \parallel CD$.**

a. If ∠CLK measures 120°, what is the measure of ∠AKJ? _____.

How do you know? _____

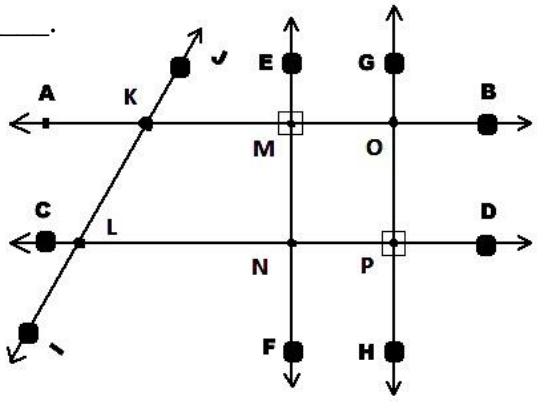
b. What would be the measure of ∠KLD? _____

c. What is the relationship between lines EF and GH?

_____

d. What is the relationship between lines EF and AB?

_____




e. If MN = 4 cm, what is OP? _____

f. If NP = 3 cm, what is MO? _____

**Extra Credit: Construct an angle equal to ∠Q + ∠R.**