August 28, 2015

# Geometry

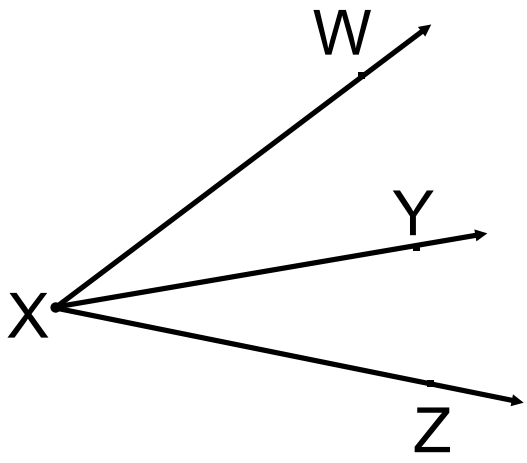
## Notes Section 14

**VOCABULARY**

| | |
|---|---|
| **Angle:** | 2 rays that share a common endpoint |
| **Vertex:** | endpoint |
| **Acute Angle:** | an angle more than 0 degrees, but less than 90 degrees |
| **Right Angle:** | an angle = 90 degrees |
| **Obtuse Angle:** | an angle more than 90 degrees, but less than 180 degrees |
| **Straight Angle:** | an angle = 180 degrees |
| **Reflex Angle:** | an angle more than 180 degrees, but less than 360 degrees |
| **Congruent angles:** | angles with = measure |
| **Angle Bisector:** | a ray that divides an angle into 2 congruent angles |

## EXAMPLES

1) Name 3 angles in the diagram.

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## POSTULATE 3

| Ray Endpoint - Ray Endpoint |

(Protractor Postulate)

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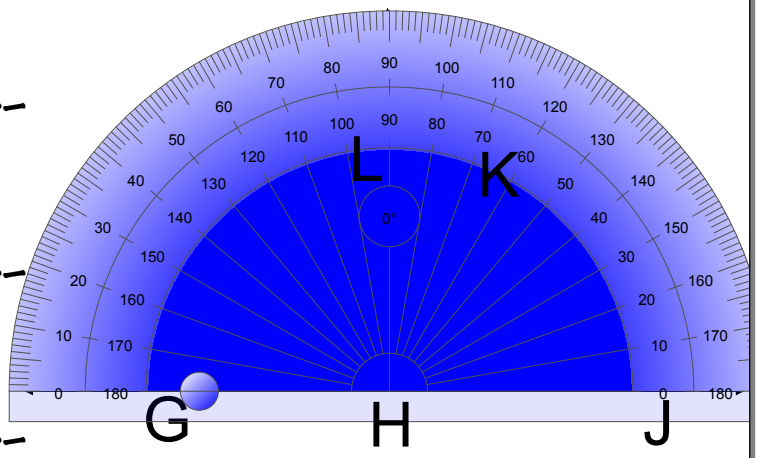
## 2) Find the measure of each angle, then classify.

a) angle KHJ _____

b) angle GHK _____

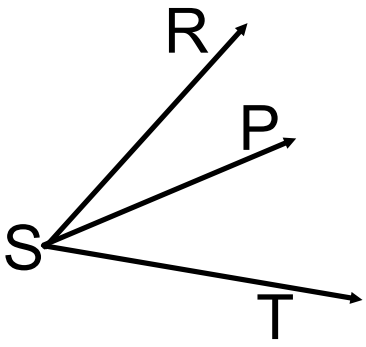
c) angle GHJ _____

d) angle GHL _____




**POSTULATE 4**

**(Angle Addition)**

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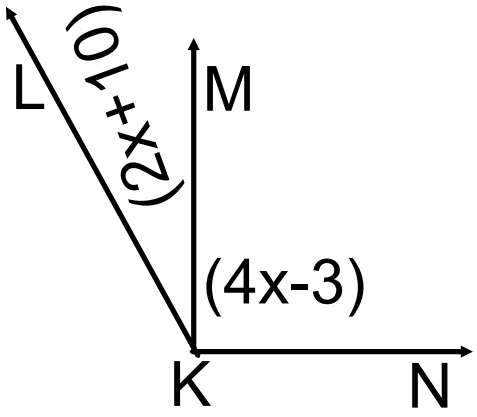
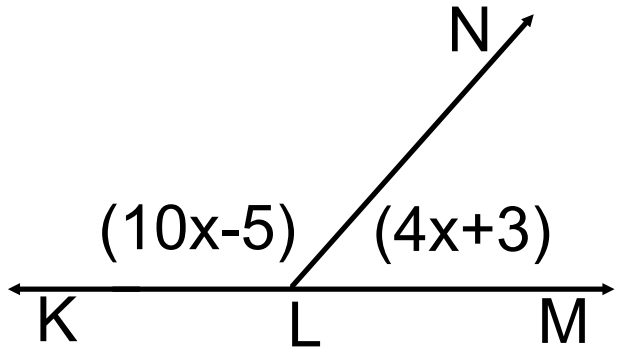
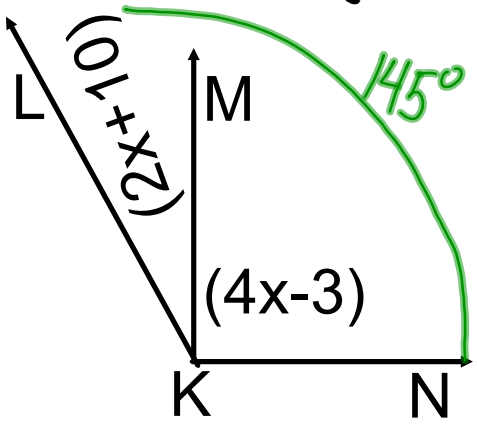
3) Measure of angle LKN=145 degrees. Find the measure of angle LKM & angle MKN.




4a) Angle KLM is a straight angle. Find the measure of angle KLN & the measure of angle NLM.



3) **Measure of angle LKN=145 degrees.** Find the measure of angle LKM & angle MKN.




$(2x+10)+(4x-3)=145$

$6x+7=145$

$-7 \quad -7$

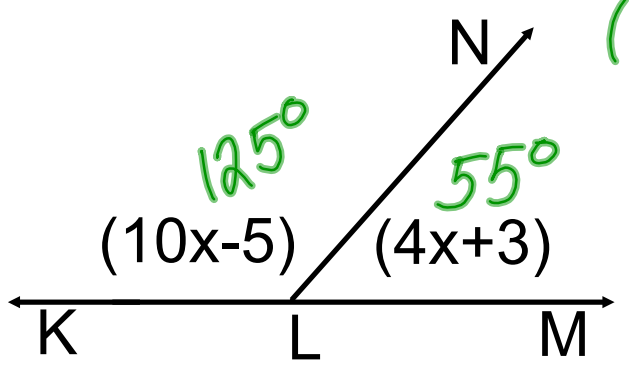
$6x=138$

$x=23$

$\angle LKN=56°$

$\angle MKN=89$

4a) **Angle KLM is a straight angle.** Find the measure of angle KLN & the measure of angle NLM.



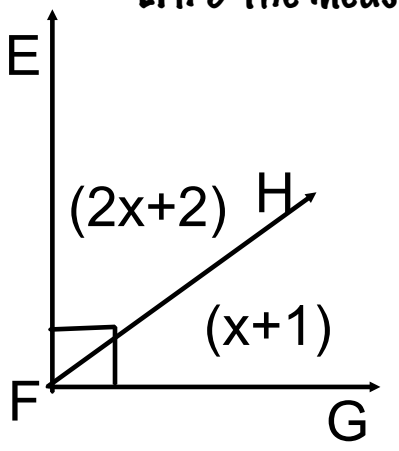

$(10x-5)+(4x+3)=180$

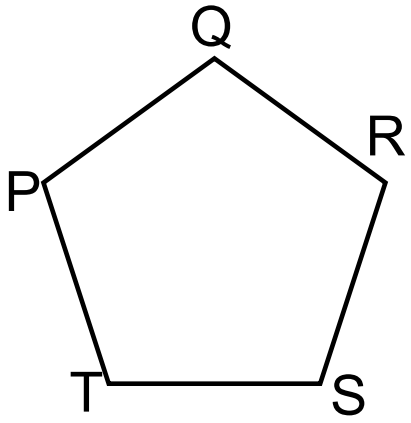
$14x-2=180$

$14x=182$

$x=13$

4b) Angle EFG is a right angle. Find the measure of angle EFH & the measure of angle HFG




5a) Identify all pairs of congruent angles.

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b) The measure of angle PQR=130 degrees, the measure of angle QRS=84 degrees, the measure of angle TSR=121 degrees. Find the measure of angle QPT & angle PTS.

6) Ray YW bisects angle XYZ , and the measure of angle XYW=18 degrees. Find the measure of angle XYZ & angle WYZ.