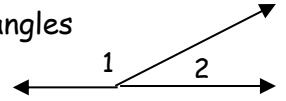


Multiple Choice: Please place the LETTER of the correct answer on the line to left of each problem.

C, D 1. Describe the relationship between angles 1 and 2. **Choose all that apply**

- A) vertical angles
 C) supplementary angles

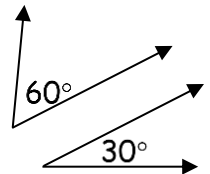
- B) complementary angles
 D) adjacent angles



_____ 2. Describe the relationship between the two angles. **Choose all that apply**

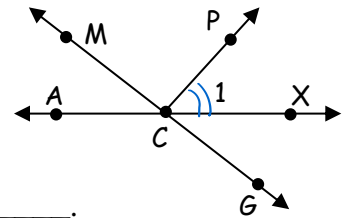
- A) complementary angles
C) supplementary angles

- B) non-adjacent angles
D) adjacent angles



C, D 3. Which of the following is the correct way to name $\angle 1$? **Choose all that apply**

- A) $\angle ACM$ B) $\angle MCP$ C) $\angle PCX$
 D) $\angle XCP$ E) $\angle MCX$ F) $\angle PCM$



A 4. An angle that measures more than 0° but less than 90° is a(n) _____.

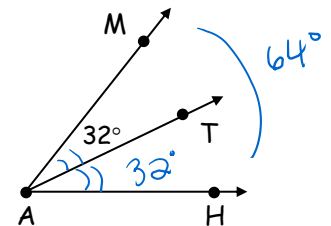
- A) acute angle
C) right angle

- B) complementary angle
D) obtuse angle

B 5. \rightarrow AT is an angle bisector. Find $m\angle MAH$.

- A) 16°
C) 32°

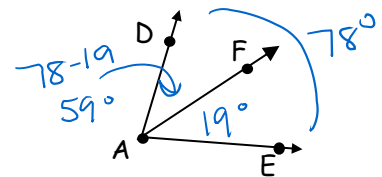
- B) 64°
D) 90°



C 6. If F is in the interior of $\angle DAE$, $m\angle DAE = 78^\circ$, and $m\angle FAE = 19^\circ$, then find $m\angle DAF$.

- A) 38°
 C) 59°

- B) 97°
D) 83°



D 7. The supplement of 45° is _____.

- A) 45°
C) 180°

$180 - 45 =$

- B) 90°
 D) 135°

B 8. Given $\angle J = 4x + 18^\circ$. If $x = 18$, then $\angle J$ can be classified as what kind of angle?

- A) Acute
C) Obtuse

- B) Right
D) Straight

$4(18) + 18 = 90^\circ$

A, D

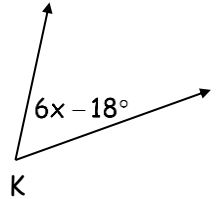
9. What values of x would make $\angle K$ an acute angle? Choose all the apply.

A) $x = 10$
 C) $x = 63$

$x = 10$
 $x = 63$

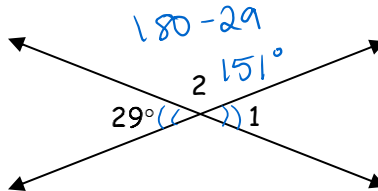
$6x - 18 > 0$ $6x - 18 < 90$
 $6x > 18$ $6x < 108$
 $x > 3$ $x < 18$

B) $x = 18$ not = 18
 D) $x = 16$ < 18



Free Response: Please solve the following problems and place your final answer on the line provided. Make sure to show all work to receive full credit.

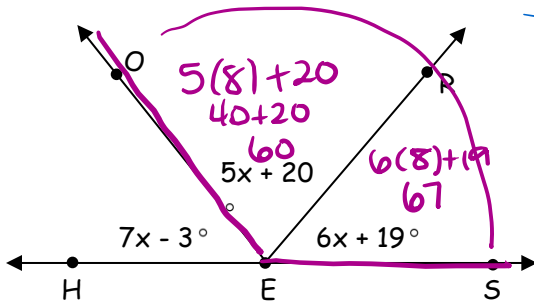
10. Find $m\angle 1$ and $m\angle 2$. (2 pts)



$m\angle 1 = \underline{29^\circ}$

$m\angle 2 = \underline{151^\circ}$

11. Solve for x . (3 pts)
 Find $m\angle OES$.



$7x - 3 + 5x + 20 + 6x + 19 = 180$
 $18x + 36 = 180$
 $18x = 144$
 $x = 8$

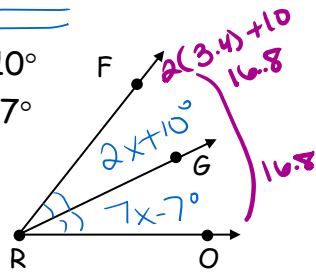
$x = \underline{8}$

$m\angle OES = \underline{127^\circ}$

$60 + 67$

12. RG is an angle bisector. Find x and $m\angle FRO$. (3 pts)

$m\angle FRG = 2x + 10^\circ$
 $m\angle GRO = 7x - 7^\circ$



$2x + 10 = 7x - 7$
 $17 = 5x$
 $x = 3.4$

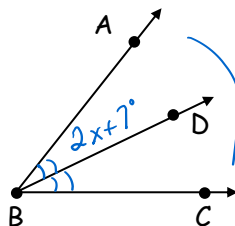
$x = \underline{3.4}$

$m\angle FRO = \underline{33.6^\circ}$

$2(16.8)$

13. BD is an angle bisector. Find x . (2 pts)

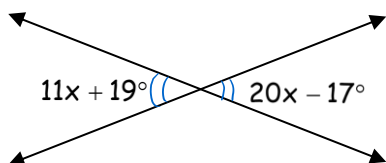
$m\angle ABD = 2x + 7^\circ$
 $m\angle ABC = 9x - 16^\circ$



$2(2x + 7) = 9x - 16$
 $4x + 14 = 9x - 16$
 $30 = 5x$
 $x = 6$

$x = \underline{6}$

14. Solve for x . (2 pts)



$11x + 19 = 20x - 17$
 $36 = 9x$
 $x = 4$

$x = \underline{4}$