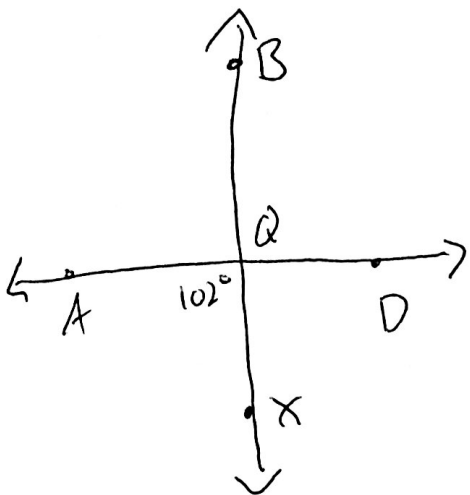


# Geometry HW 1-1 Answers

①



$$m\angle AQB = 102^\circ$$

\*  $m\angle BQD = 102^\circ$  b/c it is vert to  $\angle AQB$  so measures =

$$* m\angle AQB = 180 - 102 = \boxed{78^\circ}$$

b/c  $\angle AQB$  and  $\angle AQB$  are a lin pair so supp.

\*  $m\angle XQD = 78^\circ$  b/c it is vert to  $\angle AQB$  so measures

② Comp  $\angle$ 's add to  $90^\circ$

$$4x + 14 + 6x + 6 = 90$$

$$10x + 20 = 90$$

$$10x = 70$$

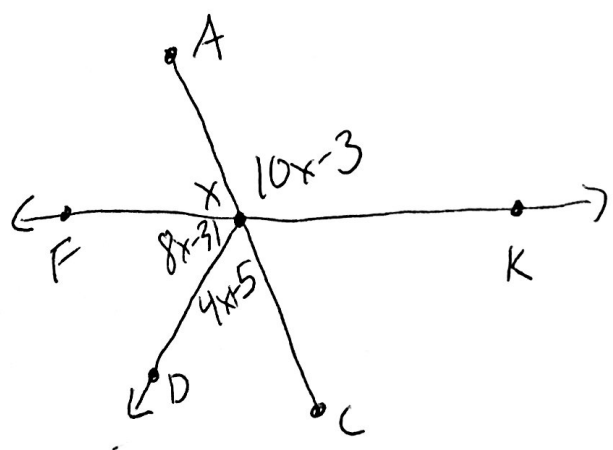
$$x = 7$$

$$4(7) + 14 = 42^\circ$$

$$6(7) + 6 = 48^\circ$$

larger  $\angle$  is  $48^\circ$

③



$m\angle AXK = m\angle FXC$  b/c vert  $\angle$ 's =  
 $m\angle FXC = m\angle FXD + m\angle DXC$  b/c  
 sum of parts =

$$8x - 31 + 4x + 5 = 10x - 3$$

$$12x - 26 = 10x - 3$$

$$2x = 23$$

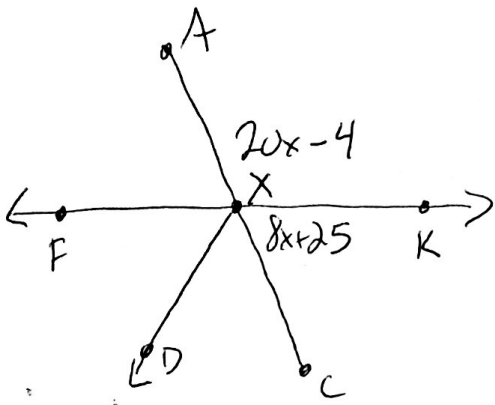
$$\boxed{x = 11.5}$$

$m\angle AXF$  and  $m\angle AXK$  are lin pair  
 so supp

$$m\angle AXK = 10(11.5) - 3 = 112$$

$m\angle AXF = 180 - 112 = 68^\circ$

(4)



\*  $\angle AXK$  and  $\angle XKC$  are lin pair so supp

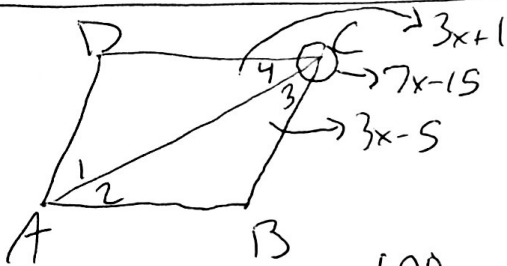
$$20x - 4 + 8x + 25 = 180$$

$$28x + 21 = 180$$

$$28x = 159$$

$$\boxed{x = \frac{159}{28}}$$

(5)



\*  $m\angle DCB = m\angle 4 + m\angle 3$  b/c sum of parts = whole

$$3x + 1 + 3x - 5 = 7x - 15$$

$$6x - 4 = 7x - 15$$

$$\boxed{x = 11}$$

$$m\angle DCB = 7(11) - 15 = 62^\circ$$

$$\boxed{m\angle CBA = 180 - 62 = 118^\circ}$$

(6)

vertical angles are =

$$9x - 10 = 7x + 8$$

$$2x = 18$$

$$x = 9$$

$$m\angle FXP = 9(9) - 10 = 71^\circ$$

$$\boxed{m\angle LXM = 2(71) - 6 = 136^\circ}$$

(7)

$$m\angle SMW \rightarrow x \rightarrow \boxed{15}$$

$$m\angle UPS \rightarrow 2x + 4 \rightarrow 2(15) + 4 = \boxed{34}$$

$$x + 2x + 4 = 49$$

$$3x + 4 = 49$$

$$3x = 45$$

$$\boxed{x = 15}$$

$$34$$

$$-15$$

$$\boxed{19}$$