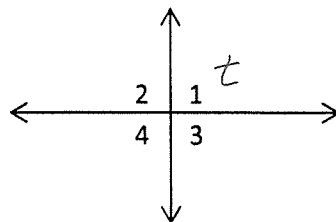


Section 1.2 - Problems from text

1. Express $m\angle 2$, $m\angle 3$ and $m\angle 4$ in terms of t when $m\angle 1 = t$.

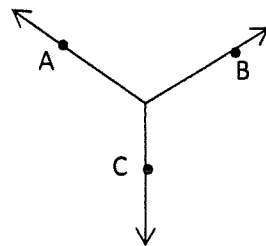
$m\angle 2 = 180 - t$ $m\angle 4 = t$

$m\angle 3 = 180 - t$



2. A careless person wrote, using the figure shown

$m\angle AOB + m\angle BOC = m\angle AOC$



What part of the Angle Addition Postulate did the person overlook?

The figure did not indicate that B is the interior of $\angle AOC$.

3. \overline{AL} bisects $\angle KAT$. Find the value of x .

a. $m\angle 1 = 2x - 8$, $m\angle 3 = 116$

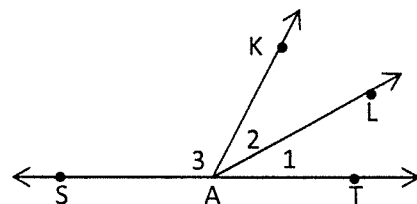
$2(2x - 8) + 116 = 180$

$4x + 100 = 180$

$x = 20$



ck
 $m\angle 1 = 32$
 $32 + 32 + 116 = 180$



b. $m\angle 2 = x + 12$, $m\angle 3 = 6x - 20$

$2(x + 12) + 6x - 20 = 180$

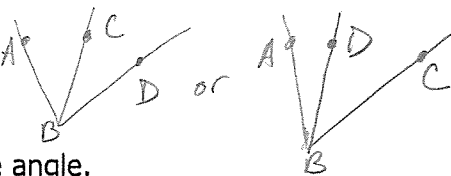
$8x = 176$

$x = 22$

ck
 $m\angle 2 = 34$ $m\angle 3 = 112$
 $34 + 34 + 112 = 180$

4. Determine if the following statements are Sometimes, Always or Never true. Justify your answer.

a. $m\angle ABC + m\angle CBD = m\angle ABD$



(S)

b. $\angle ABC$ and $\angle CAB$ are the same angle.

Never; these 2 \angle s have different vertices. So they are different \angle s.

c. $\angle ABC$ and $\angle EBF$ are the same angle.



(S)

d. The sum of two acute angles is an obtuse angle.

(S)

$45 + 35 = 80$

↙ not obtuse

$45 + 55 = 100$

↘ obtuse

5a

$$\angle BOF = 120$$

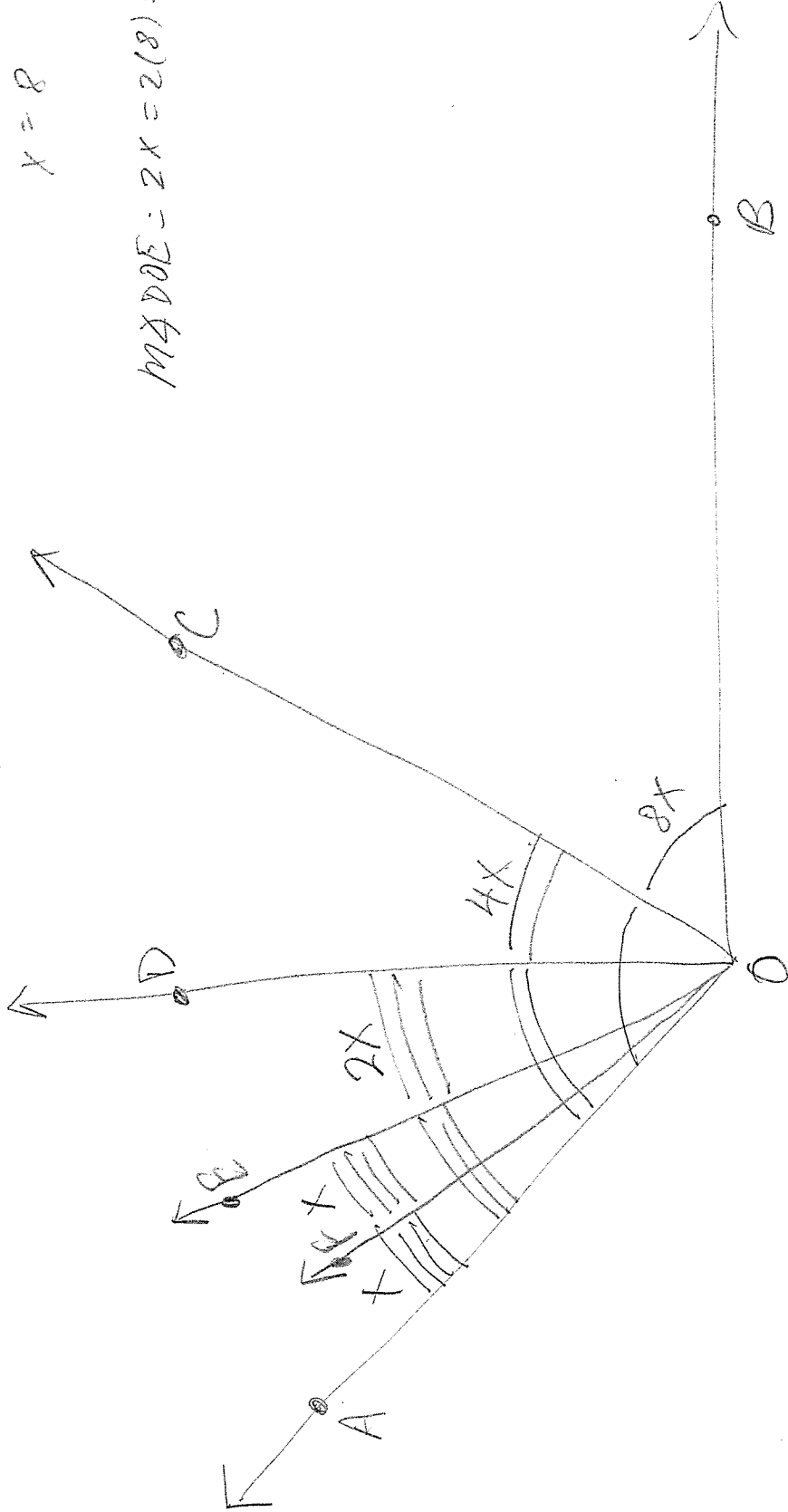
$$x + 2x + 4x + 8x = 120$$

120

$$15x = 120$$

$$x = 8$$

$$m\angle DOE = 2x = 2(8) = \underline{\underline{16}}$$



Note: If you set up: $\frac{1}{8}x + \frac{2}{8}x + \frac{4}{8}x + x = 120$
 $x = 64$

$m\angle DOE = 16!$

(56)

\overline{DG} bisects $\angle FOC$.

$$\angle FOC \cong \angle FOE + \angle EOD + \angle DOC$$

$$m\angle FOC = x + 2x + 4x$$

$$m\angle FOC = 7x$$

$$m\angle COG = \frac{7}{2}x$$

$$35 = \frac{7}{2}x$$

$$70 = 7x$$

$$10 = x$$

$$m\angle FOG = 35$$

$$\frac{-10 = x = m\angle FOE}{25}$$

$$m\angle EOG = \boxed{25}$$

