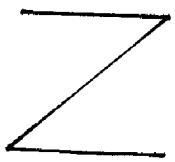
Name: Key Period: 6·7 Date: 2017

Study Guide Chapter 9 **Math 7**

1. Provide an example of both a drawing and sketch. Then, explain the difference between the two.

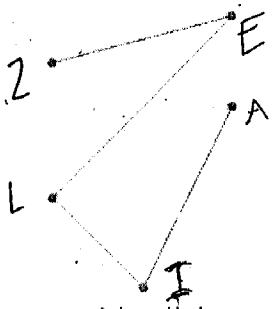
drawing: Sketch:



Z

I used a tool (ruler) to draw the left-hand Z, and I free-handed the sketch.

2. Zelia added the design below to her name plate.



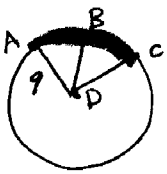
a. List all the named points in Zelia's drawing.

Point Z Point I
Point E Point A
Point L

b. List all the line segments in ~~Wendy's~~ Zelia's drawing.

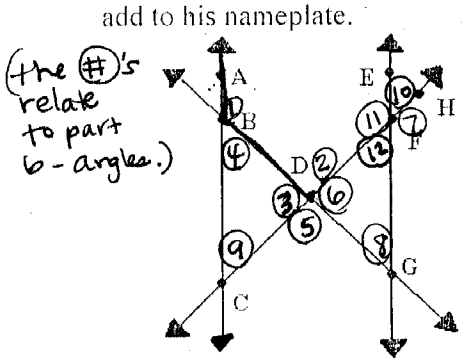
① $\overline{ZE}$
② $\overline{EL}$ (or the reverse of each of these)
③ $\overline{LI}$
④ $\overline{IA}$

3. An [redacted] of a circle contains points A, B, and C. The circle has center D. The length of $\overline{DA}$ is 9 inches. What is the sum of the lengths of $\overline{DA}$, $\overline{DB}$, and $\overline{DC}$? Explain your reasoning.



If $\overline{DA}$ is 9 inches, then the lengths of $\overline{DB}$ and $\overline{DC}$ are also 9 inches, because they are all radii of Circle D. Therefore; 9+9+9= 27 inches.

4. Dylan drew the following figure that he plans to add to his nameplate.



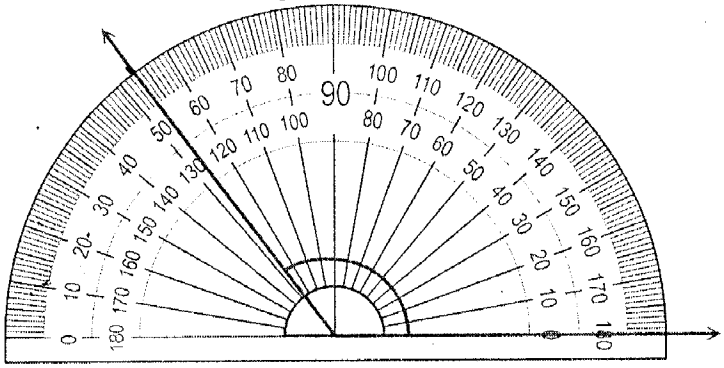
a. List all the rays in Dylan's figure.

① $\overrightarrow{AB}$ or $\overrightarrow{AG}$
② $\overrightarrow{BA}$
③ $\overrightarrow{BC}$
④ $\overrightarrow{BD}$ or $\overrightarrow{BG}$
⑤ $\overrightarrow{CB}$ or $\overrightarrow{CA}$
⑥ $\overrightarrow{GB}$ or $\overrightarrow{GD}$
⑦ $\overrightarrow{DG}$
⑧ $\overrightarrow{DB}$
⑨ $\overrightarrow{DC}$
⑩ $\overrightarrow{DF}$ or $\overrightarrow{DH}$
⑪ $\overrightarrow{CD}$, $\overrightarrow{CF}$, or $\overrightarrow{CH}$
⑫ $\overrightarrow{FH}$
⑬ $\overrightarrow{FD}$ or $\overrightarrow{FC}$
⑭ $\overrightarrow{FG}$
⑮ $\overrightarrow{FE}$
⑯ $\overrightarrow{HF}$ or $\overrightarrow{HC}$ or $\overrightarrow{HD}$
⑰ $\overrightarrow{GF}$ or $\overrightarrow{GE}$
⑱ $\overrightarrow{EF}$ or $\overrightarrow{EG}$

b. List all the angles in Dylan's figure. Do not include straight angles.

① $\angle ABG$ or $\angle ABD$ or $\angle DBA$
② $\angle BDF$ or $\angle FDB$ or $\angle BDH$
③ $\angle BDC$ or $\angle CDB$
④ $\angle DBC$ or $\angle CBD$
⑤ $\angle CDG$ or $\angle GDC$
⑥ $\angle GDF$ or $\angle FDG$ or $\angle HDG$
⑦ $\angle GFH$ or $\angle HFG$
⑧ $\angle DGF$ or $\angle FGD$
⑨ $\angle DCB$ or $\angle BCD$
⑩ $\angle HFE$ or $\angle EFH$
⑪ $\angle EFD$ or $\angle DFE$
⑫ $\angle GFD$ or $\angle DFG$

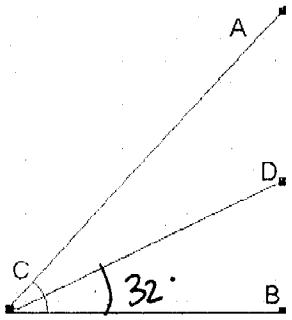
6. Frances measures an angle as shown below.



a. What is the measure of the angle? How do you know?

The angle measures 127°. Since it is an obtuse angle, it cannot be < 90°, so 53° would not work.

5. Angle ACB is bisected by $\overrightarrow{CD}$. The measure of $\angle DCB$ is 32°.



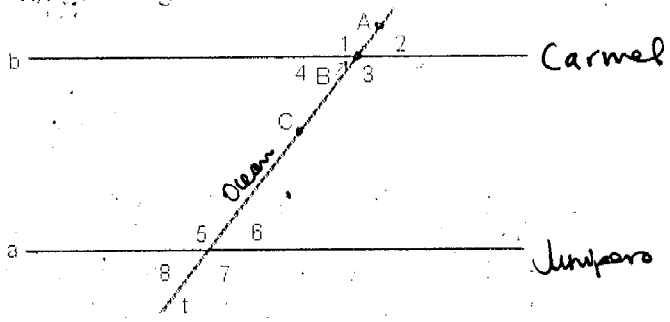
a. What is $m\angle ACD$? Explain your reasoning.

32° since $\overrightarrow{CD}$ bisects $\angle ACB$, $\angle ACD \cong \angle DCB$, because bisects means split evenly.

b. What is $m\angle ACB$? Explain your reasoning.

$m\angle ACB = 64°$. I added the measures of the two adjacent angles, $\angle ACD$ and $\angle DCB$, that make $\angle ACB$. $32 + 32 = 64$.

7. Carmel Avenue & Ocean Boulevard both intersect at point B. Carmel Avenue is parallel to Junipero Street. The measure of angle 3 is 100°.



a. What is $m\angle 1$?

If $m\angle 3 = 100$, and $\angle 1$ is vertical to $\angle 3$, then $m\angle 1$ is also 100°

b. What is the $m\angle 2$?

Since $\angle 2$ and $\angle 3$ are a linear pair, $180 - 100 = 80° = m\angle 2$

Bonus? c. Which angle(s) is/are congruent to $\angle 8$?

$\angle 6$; ($\angle 4$, $\angle 2$)

d. ~~What is~~ Which two angles are ~~complementary~~ supplementary to $\angle 7$?

$\angle 8$ and $\angle 6$