Math 206 - Quiz 7

Name __Key__
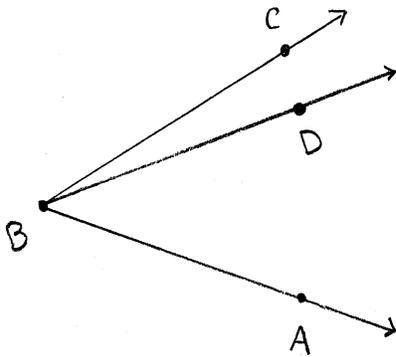
April 7, 2010

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (1.5 points) $\angle ABC$ and $\angle DBC$ are not adjacent angles. The measure of $\angle ABC$ is 68.12°, while the measure of $\angle DBC$ is 15.75°. Find the measure of $\angle ABD$ and write your result in degrees, minutes, and seconds.
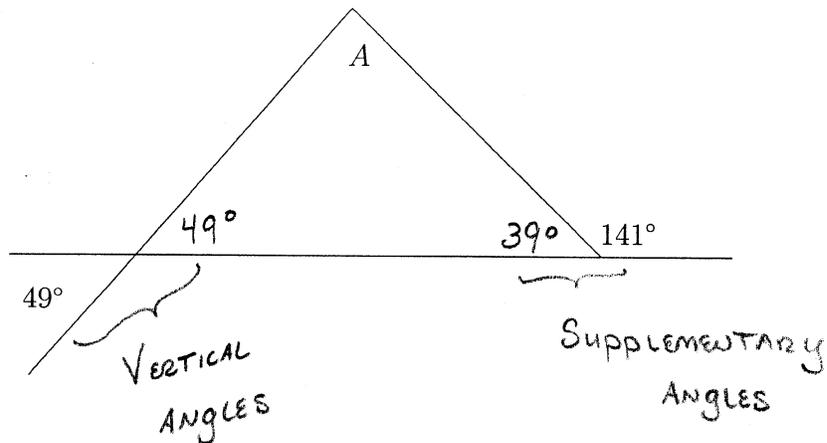
$$m(\angle ABD) = 68.12° - 15.75°$$
$$= 52.37°$$

$$\frac{0.37 \text{ deg}}{1} = \frac{60 \text{ min}}{1 \text{ deg}} = 22.2'$$

$$\frac{0.2 \text{ min}}{1} = \frac{60 \text{ sec}}{1 \text{ min}} = 12''$$
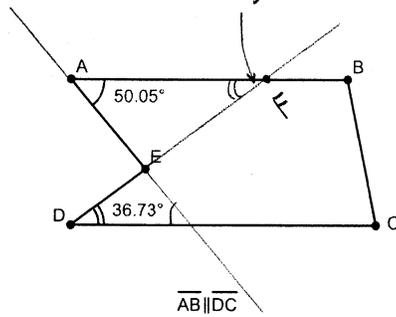
$$\boxed{52° \; 22' \; 12''}$$

2. (1 point) Find the measure of $\angle A$. Briefly explain your reasoning.

49° 49° Vertical Angles

39° 141° Supplementary Angles

$$m(\angle A) = 180° - 49° - 39°$$
$$= \boxed{92°}$$

3. (1 point)

36.73° (ALT INTERIOR ANGLES ALONG $\overleftrightarrow{DE}$)

$m(\angle AEF) = 180° - (50.05 + 36.73)$
$= 93.22°$

$\Rightarrow m(\angle AED)$
$= 180° - 93.22$
$= \boxed{86.78°}$

A 50.05°
F
B
E
D 36.73°
C

$\overline{AB} \| \overline{DC}$

Find the measure of Angle AED.

4. (1.5 points)

G
J
I 65.52°
H

SUPPLEMENTARY ANGLES

A 65.52°
114.48

CORRESPONDING ANGLES

E
101.7°
D
69.92°
B
128.91°
C

$\overline{GH} \| \overline{AE}$
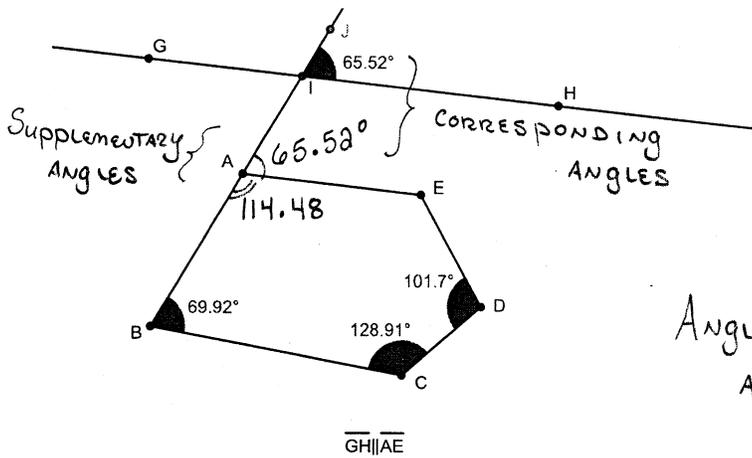
Find the measure of Angle AED.

ANGLE MEASURES FOR A CONCAVE PENTAGON ADD UP TO 540°

$m(\angle AED) = 540° -$
$(114.48 + 101.7 + 128.91 + 69.92)°$
$= \boxed{124.99°}$