

Math 206 - Quiz 8

April 13, 2011

Name key

Score _____

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

1. (1 point) Problem 11-1B, #2b

i) 10.3°

10 DEGREES

$$\frac{0.3 \text{ deg}}{1} \times \frac{60 \text{ min}}{1 \text{ deg}} = 18'$$

$$\boxed{10^\circ 18'}$$

ii) 15.14°

15 DEGREES

$$\frac{0.14 \text{ deg}}{1} \times \frac{60 \text{ min}}{1 \text{ deg}} = 8.4 \text{ min}$$

$$\frac{0.4 \text{ min}}{1} \times \frac{60 \text{ sec}}{1 \text{ min}} = 24 \text{ sec}$$

$$\boxed{15^\circ 8' 24''}$$

2. (1 point) Problem 11-2, #11

NOT EVERY RHOMBUS IS A REGULAR POLYGON. TO BE REGULAR, THE SIDES AND ANGLES MUST BE CONGRUENT. THE ONLY REGULAR RHOMBUS IS THE SQUARE.

3. (1 point) Problem 11-3A, #9

a) $\boxed{x = 40^\circ}$ (VERTICAL \angle 'S ARE CONGRUENT.)

b) $x + 4x = 90^\circ \Rightarrow 5x = 90^\circ$
 $\Rightarrow \boxed{x = 18^\circ}$

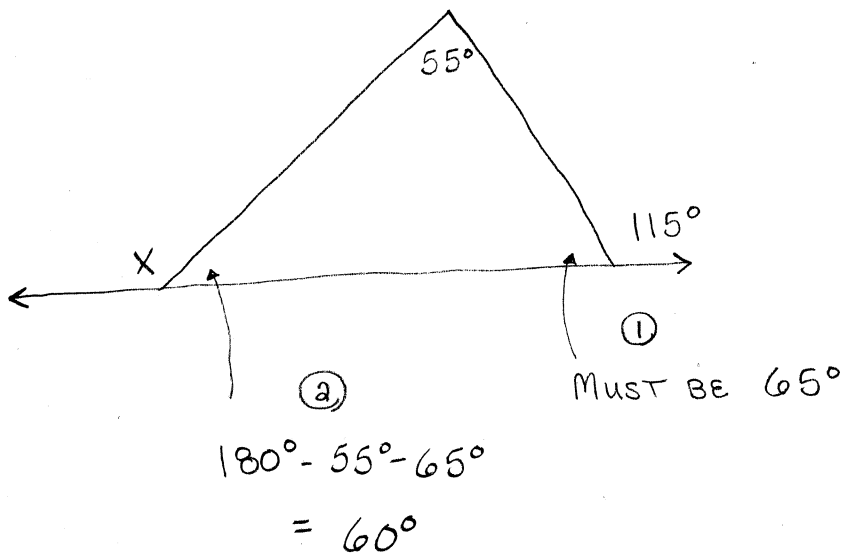
4. (1 point) Problem 11-3A #13

THE INTERIOR ANGLES OF A CONVEX HEXAGON ADD UP
TO $(6-2) \cdot 180^\circ = 720^\circ$.

$$X + 142^\circ + 122^\circ + 130^\circ + 110^\circ + 105^\circ = 720^\circ$$

$$\Rightarrow \boxed{X = 111^\circ}$$

5. (1 point) Problem 11-3B, #10b



(3) $X = 180^\circ - 60^\circ = 120^\circ$

$$\boxed{X = 120^\circ}$$