

## PRACTICE QUIZ — TEXTBOOK p. 117 # 1-14 ALL

1.  $\angle 2 = 82^\circ$

sample explanation:  $\angle 2$  is  $82^\circ$  because it is the alternate exterior angle to the given angle

2.  $\angle 6 = 82^\circ$  because it is the vertical angle of the given angle.

3.  $\angle 4 = 82^\circ$  because it corresponds with the given angle.

4.  $\angle 1 = 98^\circ$  because it is supplementary to  $\angle 4$ , which is  $82^\circ$  ( $180^\circ - 82^\circ = 98^\circ$ )

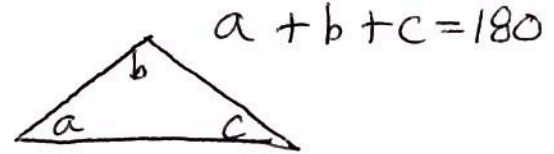
5.  $\angle 7 = 123^\circ$  because  $\angle 1$  and  $\angle 7$  are alternate exterior angles

6.  $\angle 5 = 122^\circ$  because  $\angle 6$  and  $\angle 2$  are corresponding  
 $\angle 6$  and  $\angle 5$  are supplementary ( $180 - 58 = 122^\circ$ )

7.  $\angle 3 = 119^\circ$  because  $\angle 3$  and  $\angle 5$  are alternate interior angles.

8.  $\angle 6 = 60^\circ$  because  $\angle 6$  and  $\angle 4$  are alternate exterior angles.

\* Remember, the 3 INTERIOR angles of a triangle have a sum of  $180^\circ$



9.  $x + 60 + 60 = 180$   
 $x + 120 = 180$   
 $\quad -120 \quad -120$   
 $x = 60^\circ$

3 angles are:  $60^\circ, 60^\circ, 60^\circ$

10.  $x + 40 + 25 = 180$   
 $x + 65 = 180$   
 $\quad -65 \quad -65$   
 $x = 115^\circ$

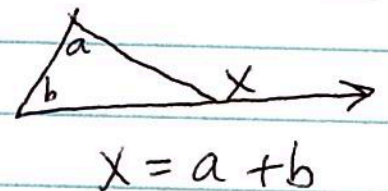
3 angles:  $25^\circ, 40^\circ, 115^\circ$

11.  $x + x + 90 = 180$   
 $2x + 90 = 180$   
 $\quad -90 \quad -90$   
 $2x = 90$   
 $\quad \frac{2}{2} \quad \frac{2}{2}$   
 $x = 45$

3 angles:  $45^\circ, 45^\circ, 90^\circ$

14.  $\angle 1 = 108^\circ$  because the angle below it is the alternate interior angle of the given angle.  
 $\angle 2 = 108^\circ$  because it is vertical to  $\angle 1$ .

\* Remember, the exterior angle of a triangle is equal to the sum of the two nonadjacent interior angles.



12.  $b = 55 + 50$   
 $b = 105^\circ$

13.  $z + 50 = 4z + z + 10$   
 $z + 50 = 5z + 10$   
 $\quad -z \quad -z$

$50 = 4z + 10$   
 $\quad -10 \quad -10$   
 $40 = 4z$   
 $\quad \frac{40}{4} \quad \frac{4z}{4}$   
 $10 = z$

$z = 10$ ,  
 so  $z + 50 = 60^\circ$