

Part I Solutions

#1. 360 (subtract the exterior angles from 360° b/c the sum of the exterior angles must be 360° .)

$$\begin{array}{r} 360 \\ -100 \\ \hline 260 \\ -173 \\ \hline 87 \\ x^\circ = 87^\circ \end{array}$$

#2. 360

$$\begin{array}{r} 360 \\ -105 \\ \hline 255 \\ -65 \\ \hline 190 \\ -90 \\ \hline 100 \\ x^\circ = 100^\circ \end{array}$$

#3. 360 the \perp symbol means that angle is 90°

$$\begin{array}{r} 360 \\ -90 \\ \hline 270 \\ -59 \\ \hline 211 \\ -59 \\ \hline 152 \\ -99 \\ \hline 53 \\ x^\circ = 53^\circ \end{array}$$

For Problems 4-7 you need to find the sum of the angles using the formula $(n-2)180$ because they are interior angles. n is the # of sides

#4. $(n-2)180$
 $(3-2)(180) = 180$

$$\begin{array}{r} 180 \\ -65 \\ \hline 115 \\ -85 \\ \hline 30 \\ x^\circ = 30^\circ \end{array}$$

#5. $(4-2)180 = 360$

$$\begin{array}{r} 110 \\ + 85 \\ \hline 195 \\ - 248 \\ \hline 248 \\ 112 \\ x^\circ = 112^\circ \end{array}$$

#6. $(5-2)180 = 540$

$$\begin{array}{r} 59 \\ 157 \\ + 123 \\ \hline 429 \\ 111 \\ x^\circ = 111^\circ \end{array}$$

#7. $(6-2)180 = 720$

$$\begin{array}{r} 101 \\ 162 \\ 80 \\ + 100 \\ \hline 563 \\ 720 \\ - 563 \\ \hline 157 \\ x^\circ = 157^\circ \end{array}$$

8. 18-gon

9. pentagon

10. octagon

11. triangle

12. heptagon

13. hexagon

14. quadrilateral

15. nonagon

16. decagon