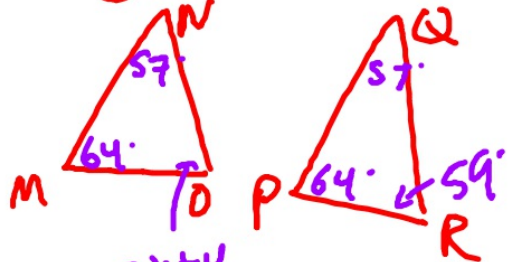


More review: p. 165: #7, 9, 10

7  $\triangle MNO \cong \triangle PQR$ ,  $m\angle N = 57^\circ$ ,  $m\angle P = 64^\circ$  and  $m\angle O = 5x + 4$ . Find  $x$  and  $m\angle R$ .

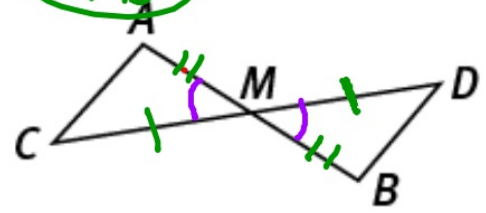
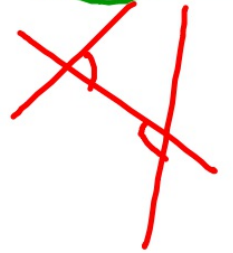


$$\begin{array}{r} 180^\circ \\ - 57 \\ - 64 \\ \hline 59^\circ \end{array}$$

$$\begin{array}{r} 5x + 4 = 59 \\ \hline x = 11 \end{array}$$

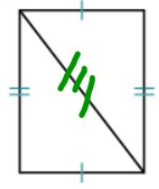
9  $M$  bisects  $\overline{AB}$  and  $\overline{CD}$ .

SAS



10

SSS



CPCTC: (add to notes and/or foldable)

Corresponding  
Parts of  
Congruent  
Triangles are  
Congruent



Using HL and CPCTC to prove a theorem about Isosceles Triangles: p. 186

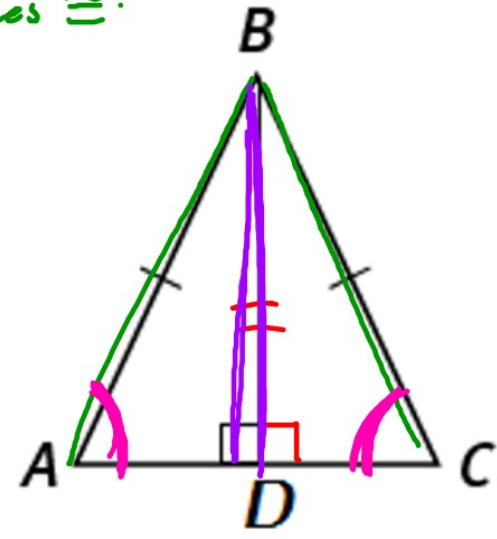
Given: Isosceles triangle ABC where  $\overline{AB} \cong \overline{CB}$ ;  $\overline{BD} \perp \overline{AC}$

↳ 2 sides  $\cong$ .

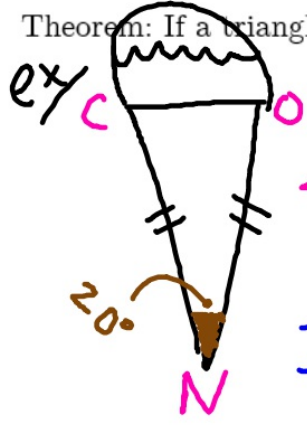
perpendicular.

Prove:  $\angle A \cong \angle C$

Statements	Reasons
1. $\overline{AB} \cong \overline{CB}$	1. Given
2. $\angle ADB = 90^\circ$	2. Definition of <u>perpendicular</u>
3. $\angle BDC = 90^\circ$	3. Definition of perpendicular
4. $\angle ADB \cong \angle BDC$	4. Definition of congruence
5. $\overline{BD} \cong \overline{BD}$	5. Reflexive Property
6. $\triangle ADB \cong \triangle CDB$	6. <b>HL</b>
7. $\angle A \cong \angle C$	7. <b>CPCTC</b> .



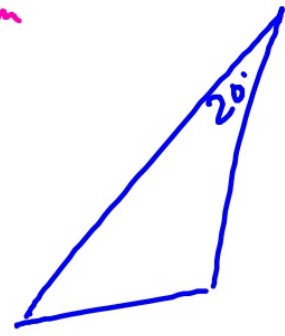
Theorem: If a triangle is an isosceles triangle, then its base angles are... congruent.



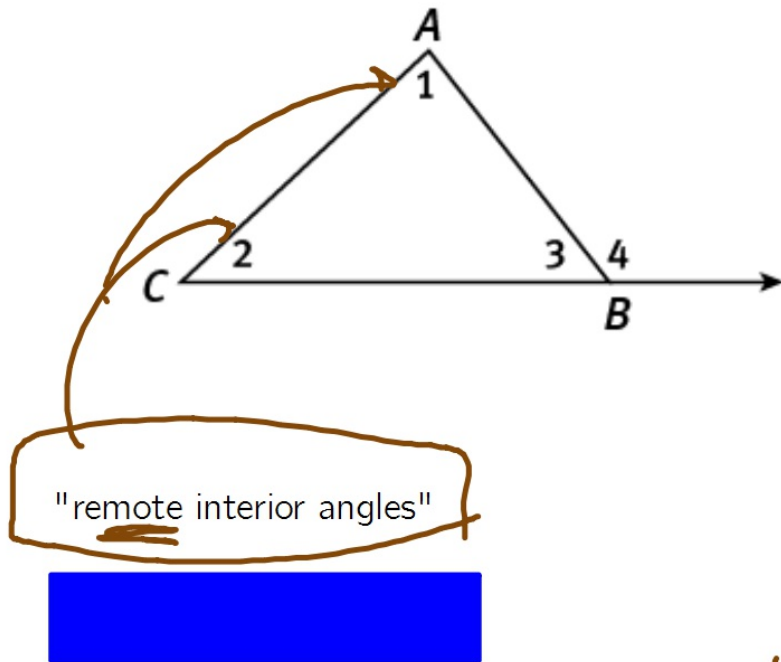
$\angle C = ?$

$$\begin{array}{r} 180 \\ - 20 \\ \hline 160^\circ \div 2 = 80^\circ \end{array}$$

angles across from  $\cong$  sides.



**Exterior Angle Theorem:** turn in your books to p. 183



Think about, then write, an equation that includes  $\angle 1$ ,  $\angle 2$ , and  $\angle 4$ .

$$\angle 1 + \angle 2 + \angle 3 = 180^\circ$$

$$\angle 3 + \angle 4 = 180^\circ$$

$$\angle 1 + \angle 2 + \angle 3 = \angle 3 + \angle 4$$

$$\begin{array}{r} -\angle 3 \\ -\angle 3 \end{array}$$

$$\angle 1 + \angle 2 = \angle 4$$

the remote interior angles' = exterior angle  
Sum