(B) Determine the unknown interior angle measure of a convex octagon in which the measures of the seven other angles have a sum of 940°.

$n =$ ☐

Sum $= (\square - 2)\,180° = (\square)\,180° = \square$

$\square + x = \square$

$x = \square$

The unknown angle measure is _____.

Reflect

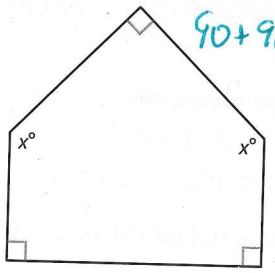
5. How might you use the Polygon Angle Sum Theorem to write a rule for determining the measure of each interior angle of any regular convex polygon with n sides?

_____

_____

Your Turn

6. Determine the unknown angle measures in this pentagon.



$90+90+90+2x=540$

$270+2x=540$

$-270 \quad -270$

$2x=270$

$x=135°$

7. Determine the measure of the fourth interior angle of a quadrilateral if you know the other three measures are 89°, 80°, and 104°.

$89+80+104+x=360$

$273+x=360$

$x=87°$

8. Determine the unknown angle measures in a hexagon whose six angles measure 69°, 108°, 135°, 204°, b°, and $2b$°.

$69+108+135+204+b+2b=720$

$516+3b=720$

$3b=204$

$b=68°$