

Section 5.2

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$$\text{diagonals} = \frac{n(n-3)}{2}$$

$$44 = \frac{n(n-3)}{2}$$

$$88 = n(n-3)$$

$$88 = n^2 - 3n$$

$$n^2 - 3n + 88 = 0$$

$$(n-11)(n+8) = 0$$

$$n-11=0 \quad n+8=0$$

$$n=11 \quad \text{or } n=-8$$

↑ inadmissible.

∴ polygon has 11 sides.