

12-5-19 6<sup>th</sup> Geo


- ① What is the sum of the angles in a decagon?

$$(n-2) \cdot 180^\circ$$

$$(10-2) \cdot 180^\circ$$

$$1080$$

- ② If the exterior angle of a polygon is  $15^\circ$ , how many sides is the regular polygon?



$n = \frac{360}{\text{ext. } \angle}$        $\text{ext } \angle = \frac{360}{n}$

$$n = \frac{360}{15}$$
$$n = 24$$

- ③ How many degrees is each interior angle of a regular octagon?

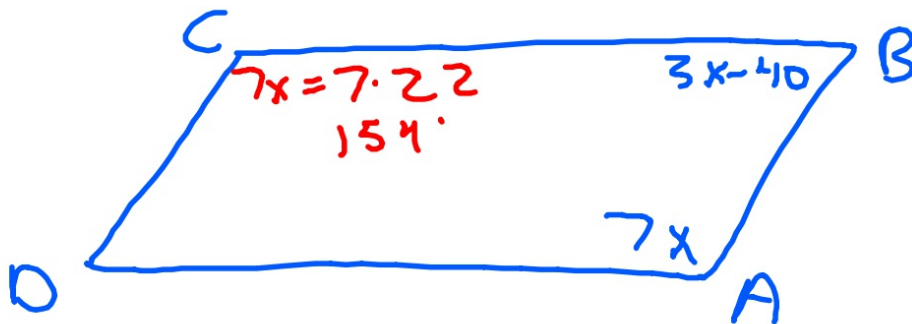


$$135^\circ \quad \text{ext } \angle = \frac{360}{8} = 45^\circ$$

OR

$$\begin{aligned} \text{sum} &= (n-2) \cdot 180^\circ \\ &= (8-2) \cdot 180^\circ \\ &= 6 \cdot 180 \\ &= \frac{1080}{8} \\ &= 135^\circ \end{aligned}$$

- ④ In parallelogram ABCD,  
 $\angle A = 7x$  and  $\angle B = 3x - 40$ .  
What is  $\angle C$ ?



$$3x - 40 + 7x = 180$$

$$10x - 40 = 180$$

$$x = 22$$

12-5-19 7<sup>th</sup> Geo

- ① What is the sum of all angles in an octagon?

$$\begin{aligned} & (n-2) \cdot 180^\circ \\ & (8-2) \cdot 180 \\ & 6 \cdot 180 \\ & 1080^\circ \end{aligned}$$

- ② If the interior angle of a regular polygon is  $165^\circ$ , how many sides is the polygon?



$$\text{ext } \angle = \frac{360}{n}$$

$$n = \frac{360}{\text{ext. } \angle}$$

$$n = \frac{360}{15} = 24$$

- ③ If  $ABCD$  is a parallelogram with  $\angle A = 7x$  and  $\angle B = 3x - 10$ , what is  $\angle C$ ?

