

Geo HW 6-1

1) Regular \rightarrow all sides \cong and all \angle s \cong

2) $(8-2)180 = 1080^\circ$

3) $(22-2)180 = \frac{3600}{22} = 163.64^\circ$

5*) $2x+12 = 3x+7$ (all \cong sides of reg hexagon \cong)

$$5 = x$$

$$2(5)+12 = 22 \text{ each side}$$

$$22(6) = \boxed{132} \rightarrow \text{perim of reg hexagon}$$

4) $180 - 157.5 = 22.5$ (int \angle & ext \angle supp)
 \uparrow
ext \angle

$$\frac{360}{22.5} = 16 \text{ sides (ext } \angle\text{s total } 360 \text{ for all polygons)}$$

* 9) $\frac{360}{7} = 51.43^\circ$

8) ~~$\frac{360}{48} = 45^\circ$~~ $\frac{360}{24} = 15 \text{ sides}$

* 7) ~~$\frac{360}{5} = 72^\circ$~~ 360° in all polygons

10) $\frac{360}{20} = 18 \text{ sides}$

$$3x+1 = 4x-2$$

$$x=3$$

$$3(3)+1 = 10 \text{ (each side)}$$

$$18 \times 10 = \boxed{180} \text{ perim}$$

11)



$\frac{360}{30} = 12$ sides (12 30° central \angle 's make 360°)
regular dodecagon

12)

$\frac{360}{8} = 45^\circ$ every 45° it has rotational symmetry