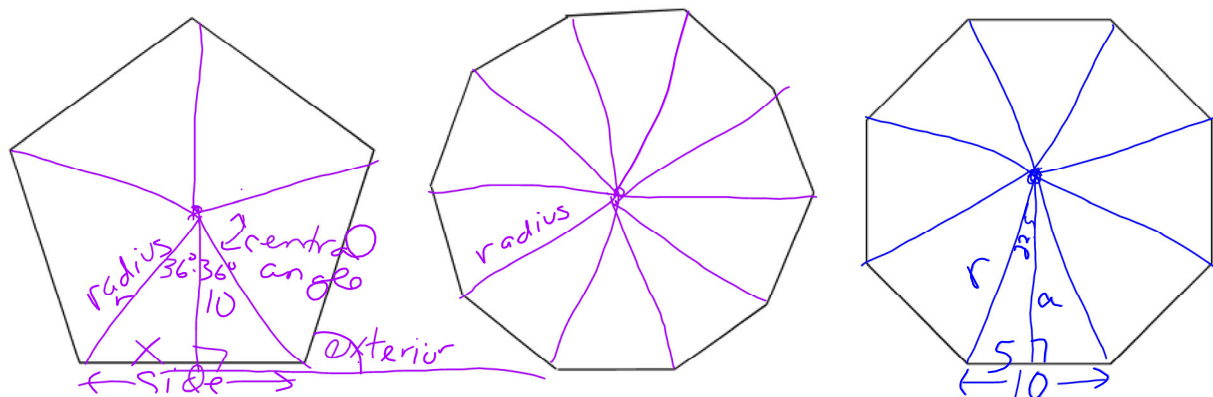


Regular Polygon Practice

Using the polygon diagrams shown, complete the table below. Show work, especially for problems 6-10.



	$n=5$ Pentagon	$n=10$ Decagon	$n=8$ Octagon
1. sum of the interior angles	$(5-2) \cdot 180$ 540°	$(10-2) \cdot 180$ 1440°	$(8-2) \cdot 180$ 1080°
2. one interior angle	$\frac{540}{5} = 108^\circ$	$\frac{1440}{10} = 144^\circ$	$\frac{1080}{8} = 135^\circ$
3. sum of the exterior angles	360°	360°	360°
4. one exterior angle	$\frac{360}{5} = 72^\circ$	$\frac{360}{10} = 36^\circ$	$\frac{360}{8} = 45^\circ$
5. central angle	72°	36°	45°
6. apothem	10 u	9.5 u	12.1
7. radius	12.4 u	10 u	13.1
8. side	14.5 u	6.2 u	10
9. perimeter	$(14.5) \cdot 5$ $72.5 u$	$(6.2) \cdot 10$ $62 u$	$10(8)$ $80 u$
10. area	$362.5 u^2$	$294.5 u^2$	$484 u^2$

$(n-2)180$

are
supplement
 $\frac{360}{n}$
 $\frac{360^\circ}{n}$