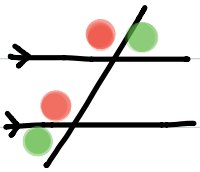
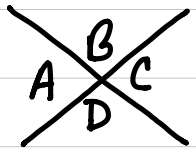
Vocabulary:

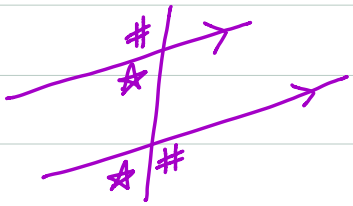
1. 140° and 40° are Supplementary angles.

2. 
   Red angles are Corresponding angles.
   Green angles are Alternate Interior angles.

3. 

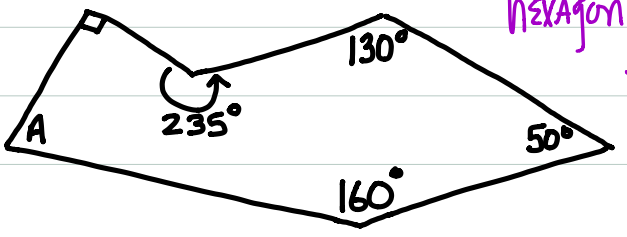
   A and C are Vertical angles.
   D and C are Supplementary and Adjacent.

4. Draw a picture of a pair of parallel lines with a transversal.
   - Mark a pair of Alternate Exterior angles with hashtags (#)
   - Mark a pair of corresponding angles with stars (☆)



5. 30° and 60° are A pair of complementary angles.

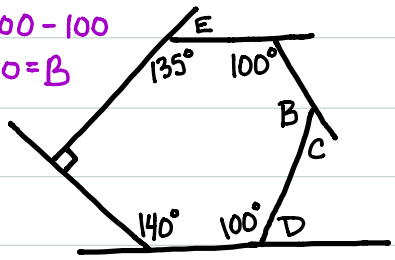
6. Find the measure of angle A ($m\angle A =$? $^\circ$)



Hexagon = $720^\circ - 160 - 50 - 130 - 235 =$
$-$ Right angle = 55°

7. Find the measure of the missing angles.

720 - 135 - 100 - 100 - 140 - 90 = B = 155



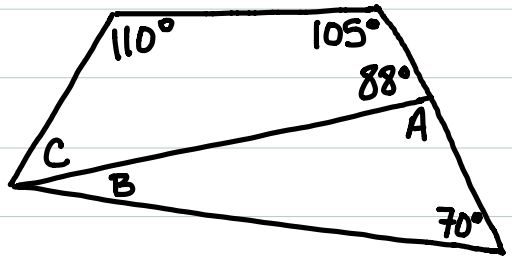
$m\angle B = 155°$

$m\angle C = 180 - 155 = 25°$

$m\angle D = 180 - 100 = 80$

$m\angle E = 180 - 135 = 45°$

8.



$m\angle A = 180 - 88 = 92°$

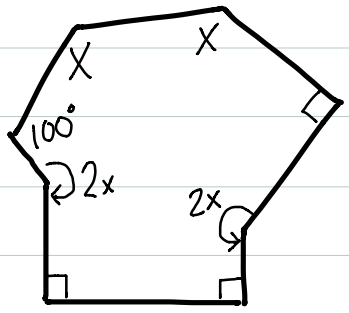
$m\angle B = 180 - 92 - 70 = 18°$

$m\angle C = 360 - 110 - 105 - 88 = 57°$

9. What is the measure of one interior angle in a regular nonagon. $1260 \div 9 = 140°$

10. What is the measure of one interior angle in a regular 12-gon. $1800 \div 12 = 150°$

11.



Write an equation: $2x + 2x + x + x + 90 + 90 + 90 + 100 = 1080$

Solve here →

$6x + 370 = 1080$

$-370 \quad -370$

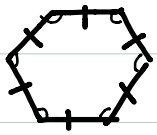
$\frac{6x}{6} = \frac{710}{6}$

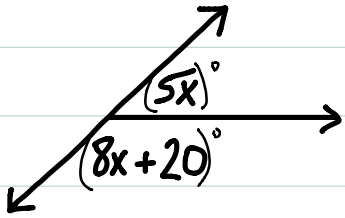
$x = 118.\overline{3}$

$m\angle X = 118.\overline{3}°$

$m\angle 2x = 236.\overline{6}°$

12. The measure of one interior angle in the shape to the right is $720 \div 6 = 120°$.



13. 

$x = 12.31°$

$(5x)° = 61.55°$

$(8x+20)° = 118.48°$

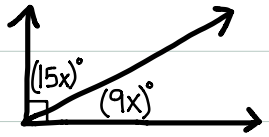
$5x + 8x + 20 = 180$

$13x + 20 = 180$

$-20 \quad -20$

$\frac{13x}{13} = \frac{160}{13}$

$x \approx 12.31°$

14. 

$x = 3.75°$

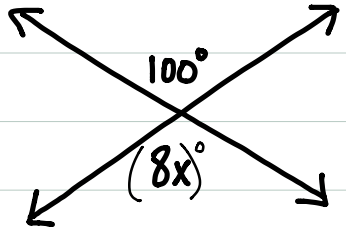
$(9x)° = 33.75°$

$(15x)° = 56.25°$

$15x + 9x = 90$

$\frac{24x}{24} = \frac{90}{24}$

$x = 3.75°$

15. 

$x = 12.5°$

$\frac{100}{8} = \frac{8x}{8}$

$12.5 = x$

16. In this last design, fill in all the missing angles.