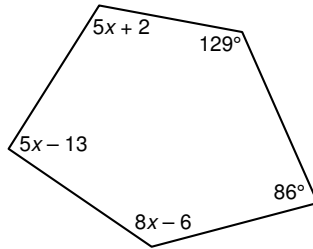


## Mixed Geometry Review: Classwork

1. A triangle has its largest interior angle  $13^\circ$  more than six times the measure of its smallest interior angle. The third angle is  $3^\circ$  less than triple the measure of the smallest angle. What are the three angles?

Let  $x$  = the measure of the smallest angle. Write and solve an equation based on the interior angle sum.

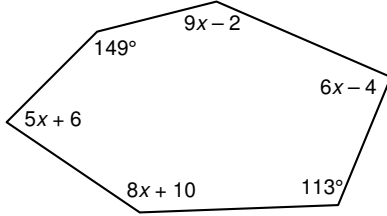
2. Use what you know about interior angle sums to find the measure of each angle. Show your algebra work.



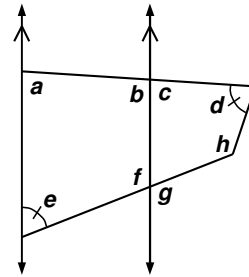
3. A triangle has its largest interior angle  $12^\circ$  less than five times the measure of its smallest interior angle. The third angle is  $24^\circ$  more than double the measure of the smallest angle. What are the three angles?

Let  $x$  = the measure of the smallest angle. Write and solve an equation based on the interior angle sum.

4. Use what you know about interior angle sums to find the measure of each angle. Show your algebra work.

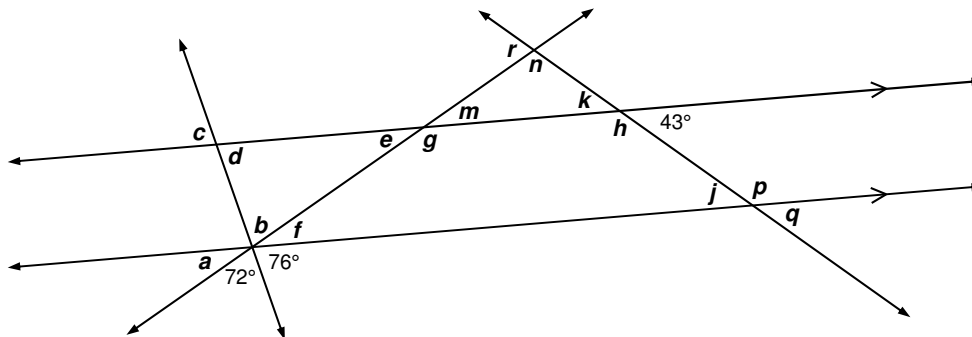


5. Complete the Statements/Reasons table and list how you determined each unknown angle if  $m\angle c = 88^\circ$  and  $m\angle g = 110^\circ$ .

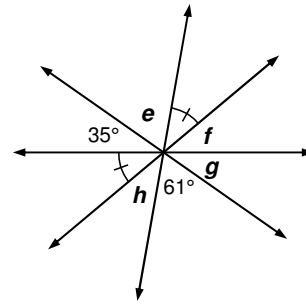
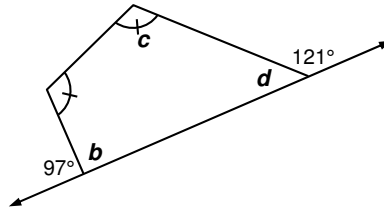
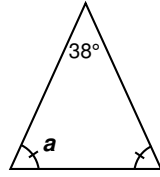


Statements	Reasons
1. $m\angle f =$	
2. $m\angle b =$	
3. $m\angle a =$	
4. $m\angle e =$	
5. $m\angle d =$	
6. $m\angle h =$	

6. Calculate each unknown angle measure without using a protractor.



7. Calculate each unknown angle measure without using a protractor.

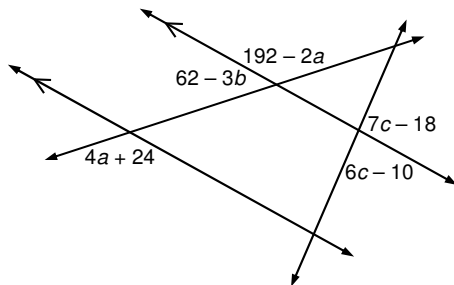


8. What is the interior angle sum of 130-sided polygon? Show your work.

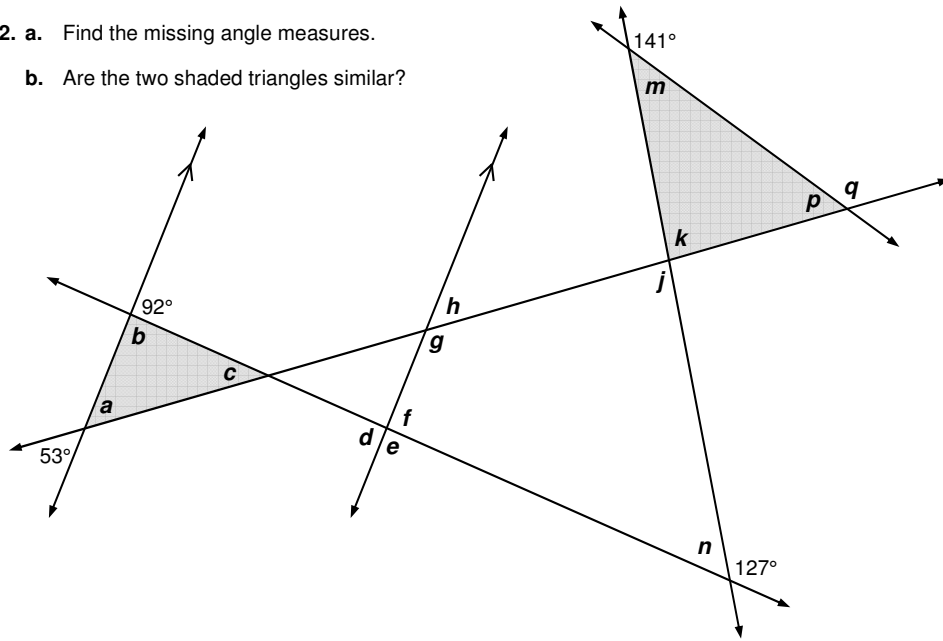
9. How many sides does a polygon have if the sum of its angle measures is  $8640^\circ$ ?  
Use the formula to find your answer. Show your work!

10. What is the measure of each interior angle of a regular 55-sided polygon (rounded to the nearest tenth)? Show your work.

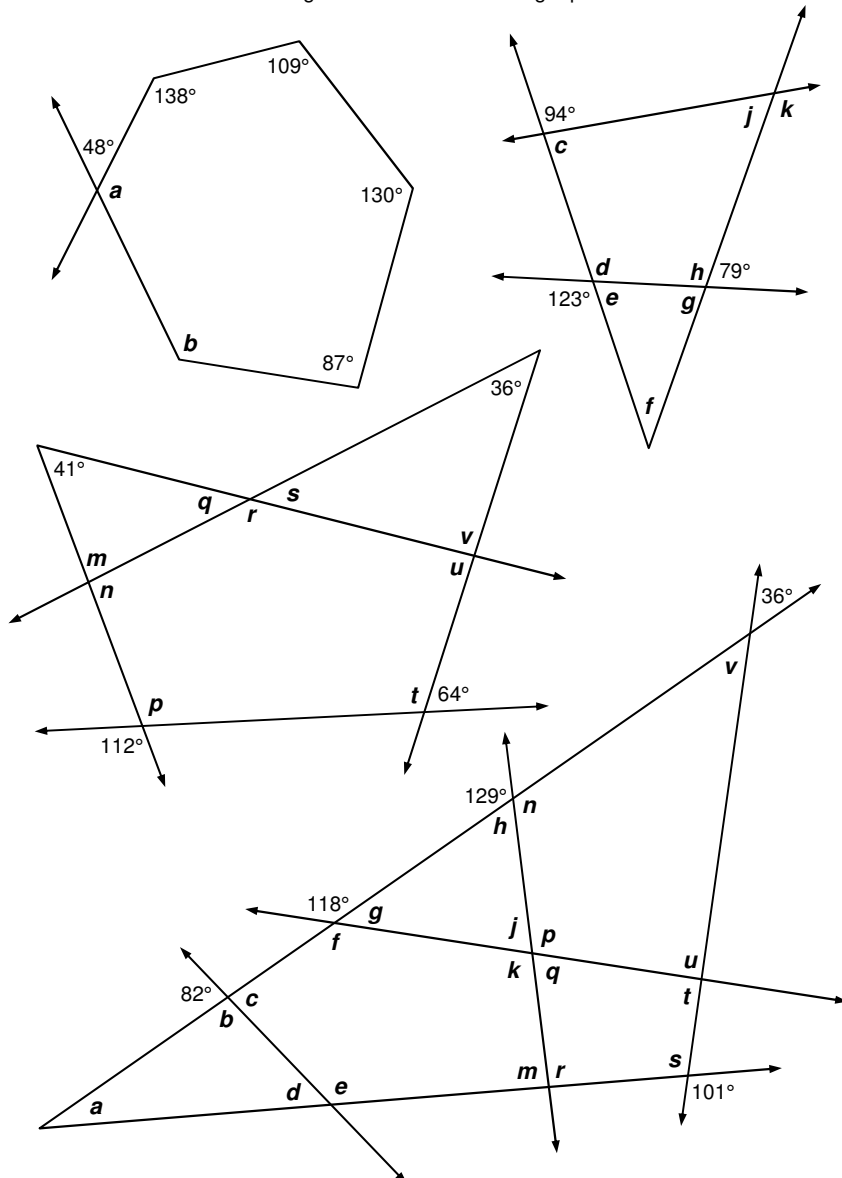
11. Write and solve an equation to find the value of each variable, then calculate the measure of each angle. Show your algebra work!



12. a. Find the missing angle measures.  
 b. Are the two shaded triangles similar?



13. Calculate each unknown angle measure without using a protractor.



Possible Answers	
32°	91°
36°	94°
39°	96°
42°	98°
43°	98°
44°	101°
48°	101°
50°	104°
51°	109°
54°	111°
55°	112°
55°	113°
57°	113°
60°	116°
62°	118°
65°	122°
67°	123°
67°	124°
73°	125°
73°	129°
79°	130°
82°	131°
82°	132°
84°	132°
86°	138°
86°	141°
89°	146°
90°	158°