

Session #382 Pattern Blocks: The Forgotten Tool in Middle School!



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Special thanks to the Center for Math and Teaching, Inc. (CMAT)! Please visit them at Booth # 811.

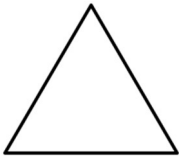
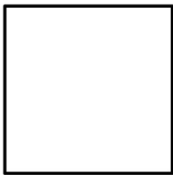
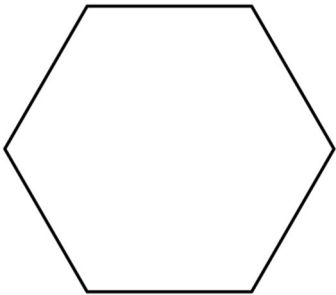
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ANGLE MEASURE EXPLORATION

Your teacher will give you some pattern blocks.

- Name each pattern block piece.
- A straight angle is 180° , and therefore, an angle that turns through a complete rotation is 360° . Use pattern blocks and the properties of the shapes to find the measure of each interior angle. **Do not use protractors**. Label the measures clearly. Explain your reasoning about how you know each of these angle measures.
- Write the sum of the interior angle measures for each of the 6 figures. List any observations.

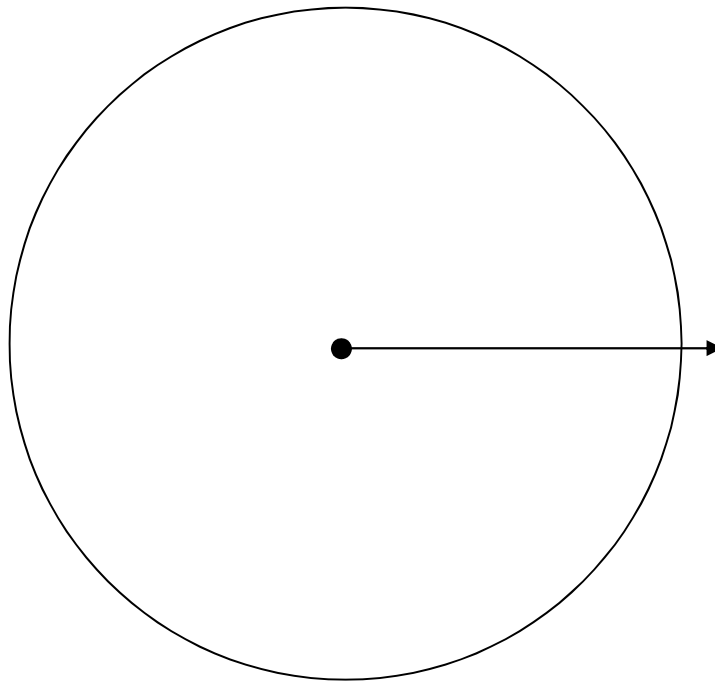
1. Name: _____  Sum: _____	2. Name: _____  Sum: _____
3. Name: _____  Sum: _____	4. Name: _____  Sum: _____
5. Name: _____  Sum: _____	6. Name: _____  Sum: _____

MAKE A PROTRACTOR

Your teacher will give you some pattern blocks. Use what you know about the measures of the angles of the shapes and choose tools you find helpful (other than a protractor) to create a circular protractor with at least 16 different angle measures on it.

Follow these conventions when labeling your protractor.

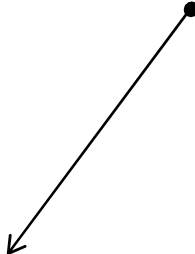
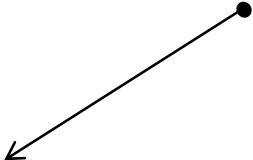
- Locate 0° with a ray that begins at the center of the circle and points to the right.
- Label angles in a counterclockwise direction.
- The angle that makes one full rotation around the circle is 360° .



1. Compare your protractor to a commercially-made protractor. How is the commercial protractor different?
2. What tools did you find most useful when creating your protractor? Explain.

DRAWING ANGLES WITH A PROTRACTOR

State whether each measure represents an acute, right, obtuse, or straight angle. Then use a protractor to draw the angle. One ray and the vertex of the angle are given.

1. 60° _____ 	2. 100° _____ 
3. 30° _____ 	4. 180° _____ 
5. 90° _____ 	6. 145° _____ 
7. 10° _____ 	8. 90° _____ 