Sample Problems

If there is a problem you can't solve, then there is an easier problem you can solve: find it. - George Polya

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Examples of interesting problems that we'll consider in this class

• Find the sum of the measures of the angles 1, 2, 9, 10, and 5 in the star-shaped figure shown.



- The positive whole number p is a multiple of 6 and has 9 factors. How many factors does 10p have?
- What is the last digit in the number $7^{7^{7'}}$
- Find the number of solutions to $\{1,2\} \in X \in \{1,2,3,4,5\}$, where X is a set. Now find the number of solutions to $\{1,2\} \subseteq X \subseteq \{1,2,3,4,5\}$.