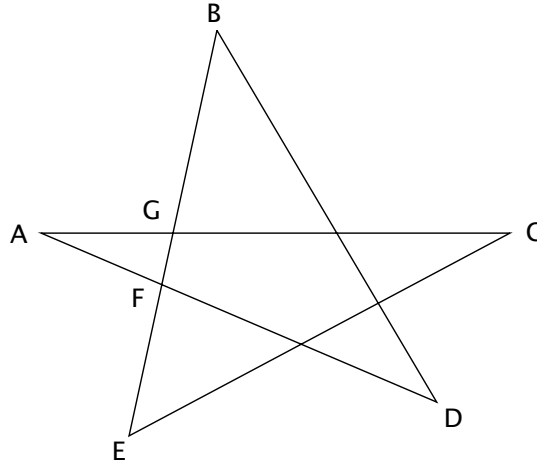


Math Awareness Week Competition  
2007 Examination for 7th-9th Grades

**DIRECTIONS:** [40 Minutes - 5 Questions] Start each new problem on a separate page. **Show your work!** Answers must be exact. You are allowed to use a calculator. You are not allowed to borrow or interchange calculators during the test.

1. If  $\angle A = 20^\circ$  and  $\angle AFG = \angle AGF$ , find  $\angle B + \angle D$ .



2. Find the unit digit of  $19^{99} + 99^{99}$ .
3. Sam tosses an nickel four times. Find the probability that he gets at least as many heads as tails.
4. The product of three consecutive integers is 8 times their sum. What are the three integers?
5. In the trapezoid  $ABCD$ ,  $AB$  and  $CD$  are the bases,  $AD = 5$ ,  $AB = 39$ ,  $BC = 12$ , and  $CD = 52$ . Find the area of  $ABCD$ .

