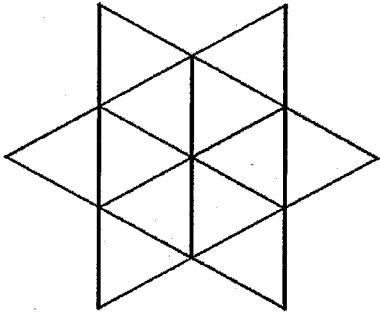


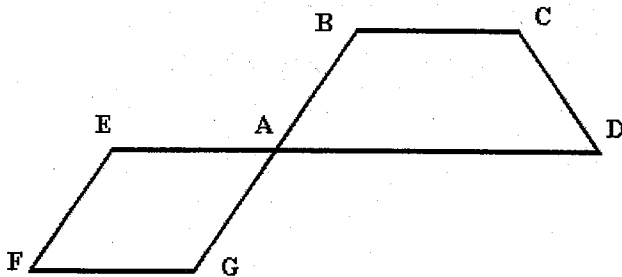
Washington State Math Championship 2007

Geometry – 5th Grade

1. A 7''x7''x7'' cube is painted on all faces and then divided into cubes measuring 1'' on an edge. How many of the smaller cubes have paint on only one face?
2. How many triangles are there in the following figure?



3. A circle has a perimeter of 12π . If its diameter is reduced by one third, what is the area of the new circle? Express your answer in terms of π .
4. ABCD is an isosceles trapezoid and AEFG is a parallelogram. If angle BCD is 124° , what is the measure of angle EFG?



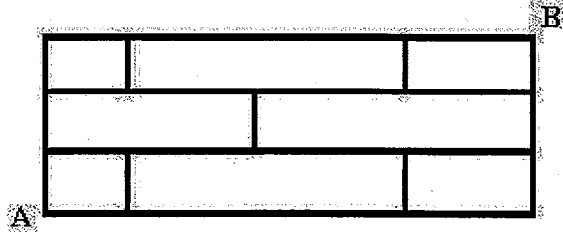
5. How many of the following letters have both reflective and rotational symmetry?

a b c d e f g h i j k l m
n o p q r s t u v w x y z

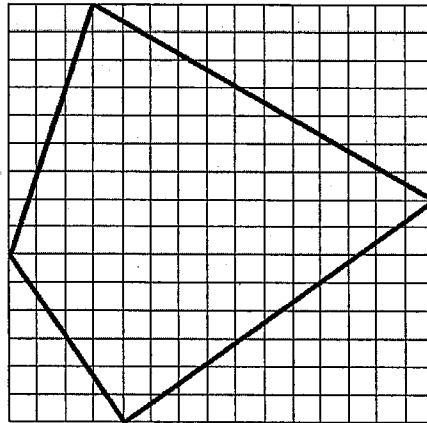
6. A man is running around the outside of a circular track with an area of 2500 square meters. What is the minimum number of full laps he must complete if he wants to run at least 2.5 kilometers?

7. An angle has the property that its complement is equal to one fourth of its supplement. What is the degree measure of the angle?

8. In the figure shown, how many ways unique ways are there to move from point A to point B if one is only allowed to move up or right?



9. Find the area of the quadrilateral shown given that each small square has an area of one square unit.



10. A triangle is drawn in the coordinate plane. Its corners can be expressed as three pairs of coordinates: $(-1,-2)$, $(3,-2)$ and $(-2,5)$. What is the area of the triangle?