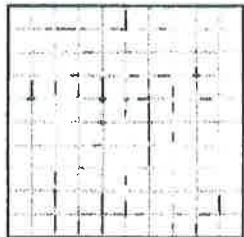


NAME: _____

Due Thursday 5/22
Worth 2 HW grades

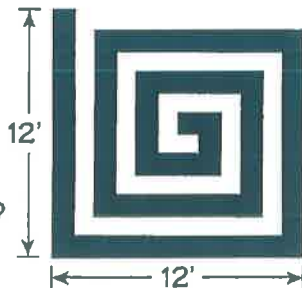
Test of Genius

1. What is the maximum number of two-by-three-inch cards that will fit completely and without overlap on the top of a ten-by-ten-inch board?



2. Turbo Tox has plenty of 0's, 1's, 3's, 4's, 5's, 6's, 7's, 8's, and 9's, but he has only twenty-two 2's. How far can he number the pages of his scrapbook with these digits?
3. How many different secret code words can you make using three stars and two dashes in each word?

4. Each path shown is one foot wide. What is the area of the shaded path?



5. Rolex buys computer disks at a price of 4 for \$5 and sells them at a price of 3 for \$5. How many computer disks must he sell to make a profit of \$100?

6. An island has no currency but instead has the following rates of exchange:

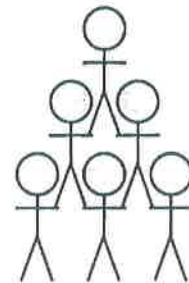
50 bananas = 20 coconuts

30 coconuts = 20 fish

100 fish = 1 hammock

How many bananas do you need to buy a hammock?

7. Six acrobats form a human pyramid, as shown. The top acrobat weighs 140 lb and the middle two weigh 130 and 150 lb. If each person's weight is evenly distributed, how many pounds must the bottom-middle acrobat support?



8. Arrange the digits 1-9 in the 9 boxes to make three equivalent fractions, all equal to $\frac{1}{2}$.

$$\frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}\boxed{}} = \frac{\boxed{}\boxed{}}{\boxed{}\boxed{}}$$

9. Add five line segments to the four below to make something equal to ten.

