TEST OF GENIUS

1. Terry, Barry, Larry, Jerry, and Perry are lined up in these positions midway through a track meet:

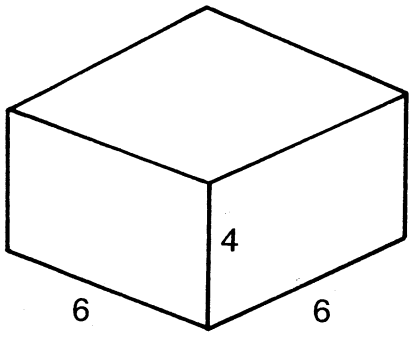
   Terry is 20 meters behind Barry.
   Barry is 50 meters ahead of Larry.
   Larry is 10 meters behind Perry.
   Jerry is 30 meters ahead of Terry.
   Perry is 50 meters behind Jerry.

   At this point in the race, who is winning? Who is second? Third?

2. What is the weight of a fish if it weighs 10 pounds, plus half its weight?

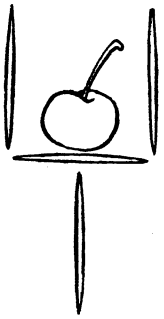
   $\underline{\quad\text{weight}\quad} = \underline{\quad\frac{1}{2}\text{ of weight}\quad} + 10 \text{ pounds}$

3. A square cake measures 6 units by 6 units by 4 units. The cake falls into a vat of frosting and comes out frosted on all six faces. The cake is then cut up into cubes, each measuring 1 unit on an edge. How many of these cubes will have exactly one face frosted?



4. Homer is giving some cookies to each of his three brothers. To the oldest, he gives half of the cookies and half a cookie. He then gives half of what is left and half a cookie to his second brother. Finally, he gives half of what is now left and half a cookie to his youngest brother. At no time is a cookie broken or cut. How many cookies did Homer have to begin with? (HINT: Work backwards.)

5. The toothpicks in the figure at the right represent a glass with a cherry inside. By moving just two toothpicks, reconstruct the glass so that the cherry, which may not be moved, winds up outside. The glass may be reconstructed on its side or even upside down, but must have the same shape.



6. When the time is 2:18, how many degrees are there in the acute angle between the minute hand and the hour hand on a clock?

7. Annabel Zonk has discovered something interesting about her first name. If the letters are arranged as they are below, it is possible to replace each different letter with a different digit and have the multiplication work out correctly. What digit should replace each letter?

$$\begin{array}{r} \text{ANN} \\ \times\ \text{A} \\ \hline \text{BEL} \end{array}$$

8. An algebra teacher drove past a farmyard that was full of chickens and pigs. The teacher happened to notice that there were a total of 70 heads and 200 legs. How many chickens and how many pigs where there?

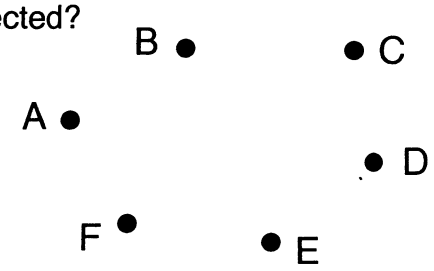
SCORING KEY

7 or 8—*Megawatt Genius*
5 or 6—*Kilowatt Genius*
3 or 4—*Genius*
1 or 2—*What Genius?*

TEST OF GENIUS

(1) The land of Euclidia has six remote towns, which we shall call A, B, C, D, E, and F. Unfortunately, not all the towns are connected by telephone lines. Town A is connected to all the other five towns, but Town B is connected to only four. Town C, too, is connected to four; whereas D, E, and F are each connected to only three towns.

There is a line from Town D to Town F. To what towns is Town E connected?



(2) In the following multiplication problem, the letters A, B, C, and D represent four different digits. What digit should replace each letter?

$$\begin{array}{r} ABCD \\ \times\ \ 4 \\ \hline DCBA \end{array}$$

(3) On what day of the week was the following statement made:

When the day before yesterday was referred to as "the day after tomorrow," the day that was then called "yesterday" was as far away from today as today is from next Saturday. (HINT: Use the diagram below.)

(4) A clock loses ten minutes each hour. If the clock is set correctly at 12 o'clock noon, what is the correct time when the clock reads 3:00 P.M.?

(5) How tall is a tree which is 15 feet shorter than a pole that is three times as tall as the tree?

(6) Rollo, Gorgo, and Zed work in the circus. They are the ringmaster, lion tamer, and clown, though not necessarily in that order.

1. Zed has red hair.
2. Rollo has curly hair.
3. The ringmaster is shorter than Rollo.
4. The lion tamer is bald.

Who is the clown?

(7) Three men, A, B, and C, were traveling with their wives, a, b, and c. They came to a river which they had to cross. There was just one boat and only two could cross at one time. Since the husbands were jealous, no woman could be left with a man unless her husband were also present. How did they get across the river?

(8) Find the number that logically continues each of these series:

a) 2, 3, 5, 9, 17, _____

b) 14, 19, 29, 40, 44, 52, _____

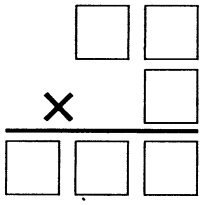
SCORING KEY

7 or 8—*Extra Extraordinary Genius*
5 or 6—*Extraordinary Genius*
3 or 4—*Ordinary Genius*
1 or 2—*Ex-Genius*

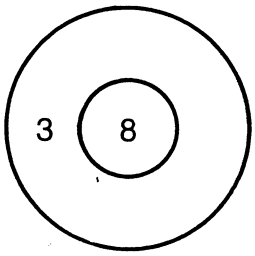
TEST OF GENIUS

1. If a brick balances evenly with three quarters of a pound and three quarters of a brick, what is the weight of a whole brick?

2. Arrange the digits 1 through 6 in the six boxes below so that the multiplication works out correctly.

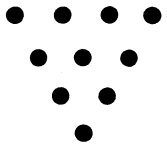


3. An unusual dartboard is shown below. Each dart scores either 3 points or 8 points. Suppose you can throw as many darts as you like, and your score is obtained by adding all the 3s and 8s together. Make a list of *all* the scores that are *impossible* to attain.



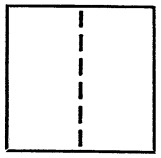
4. Bonzo went to a carnival. At the first game, he paid 10¢ to get in, spent half the money he had left, and spent 10¢ to get out. At the second game, he spent 10¢ to get in, spent half the money he had left, and spent 10¢ to get out. At the third game, he spent 10¢ to get in, spent half the money he had left, and spent 10¢ to get out. Then he found he had no money left. How much money did Bonzo start with?

5. Ten bowling pins are set up in the usual way forming a triangle with the point facing the bowler. How can 3 pins be moved so that the 10 pins are still set up in the conventional manner but with the point of the triangle away from the bowler?



6. Borfin caught a big fish. Its head was 5 inches long. The tail was as long as the head plus half the body. The body was as long as the head plus the tail. How long was the fish?

7. A square piece of paper is folded in half vertically. If the resulting figure has a perimeter of 12 cm, what was the area of the original square?



8. What is the value of the following expression:

$$(x - a)(x - b)(x - c) \ldots (x - z),$$

so that there are a total of 26 factors, with each letter of the alphabet subtracted from x in one of the factors?

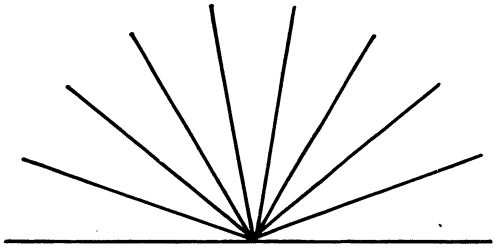
SCORING KEY

7 or *8*—*Innate Genius*
5 or *6*—*Great Genius*
3 or *4*—*Straight Genius*
1 or *2*—*Late Genius*

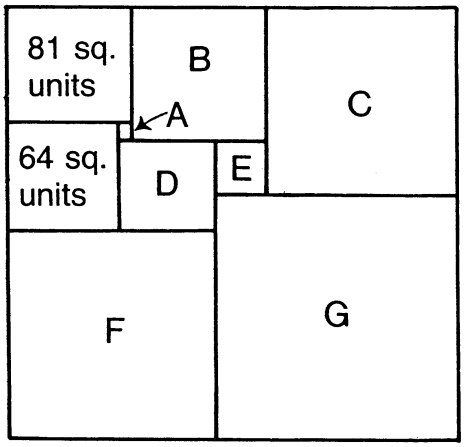
TEST OF GENIUS

1. Each of Bork's bags contains the same number of marbles. He has twice as many bags as he has marbles in each bag. If he has 32 marbles in all, how many are in each bag?

2. How many angles (less than 180°) are in the figure below?



3. The rectangle below is divided into square regions. Using the information given, find the area of each of these regions. Is the outside rectangle a square also?

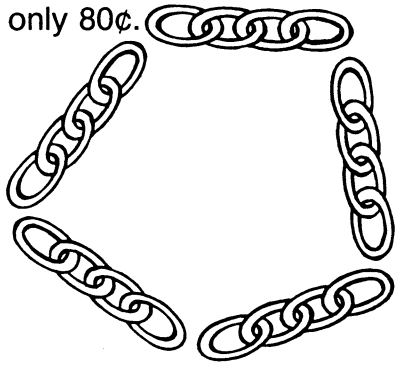


4. Show that two WRONG's can make a RIGHT. Replace each different letter in the addition below with a different digit. It is required that O = zero.

$$\begin{array}{r} \text{WRONG} \\ +\ \text{WRONG} \\ \hline \text{RIGHT} \end{array}$$

5. Jennifer's brother Matthew has one more brother than he has sisters. How many more brothers than sisters does Jennifer have?

6. Rolex has five pieces of chain, each containing four links. He wants to join the pieces to form a circle. If it costs 10¢ to open a link, and 10¢ to close a link, find a way he can do this for only 80¢.



7. A, B, and C decide to play poker. They agree that when a player loses a hand, he will pay each of the others an amount equal to the amount each player already has. A loses the first hand and pays B and C the amount of money each has; B loses the second hand and pays A and C the amount of money each has; C loses the third hand and pays A and B the amount of money each has. At this point, each player has $8. How much did each player start with?

8. Leather shoes are worn in bowling and rubber-soled sneakers in tennis. In what sport are all-metal shoes worn?

SCORING KEY
7 or 8 — *Foremost Genius*
5 or 6 — *Fabulous Genius*
3 or 4 — *Frequent Genius*
1 or 2 — *Future Genius*