

# MATH SUPERSTARS – 6

## Uranus, XXIV

Name: \_\_\_\_\_

(This shows my own thinking.)

★★★ 1. Solve each problem below. The data comes from the *Guinness Book of World Records*. Round your answers to the nearest whole number.

a. The longest distance travelled by a go-kart in a 24-hour race is 1,018 miles. What was its average speed in miles per hour?

Answer: \_\_\_\_\_

b. The longest distance travelled by a truck riding on 2 side wheels is 2,864 miles. How far did the other two wheels travel on the trip?

Answer: \_\_\_\_\_

c. The fastest long-distance drive *backwards* in a car went 501 miles in 17.6 hours. What was the average speed for the car?

Answer: \_\_\_\_\_

★★★ 2. Tamara forgot to buy candles for her older brother's birthday cake, so she used the ones she had left from a previous birthday. She told him "Two candles stand for 6 years." How old was her older brother?



Answer: \_\_\_\_\_

★★★★ 3. Try this number trick on three people, except for the final step of telling their age and amount of change. Write down the answers each person gives you, together with their age and the amount of pocket change they have. Then decide how you can say how old they are, and how much change they have, *just from looking at the final answer they give you*.

### Age and Pocket Change

by Dr. Wonderful

Step 1. Take your age (years).

Step 4. Subtract the number of days in 1 year.

Step 2. Double it, then add 5.

Step 5. Add your pocket change (e.g., 49¢)

Step 3. Multiply by 50.

Step 6. Add 115. What's your answer?

Aha: You are \_\_\_\_ years old and have \_\_\_\_¢ in your pocket.

Answer: When I hear their final answer, \_\_\_\_\_ tells me how old they are, and \_\_\_\_\_ tells me their change.

★★★ 4. Find 40% of  $(13.5 - 2.08 + 8\frac{58}{100})$ :

Answer: \_\_\_\_\_

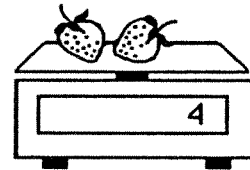
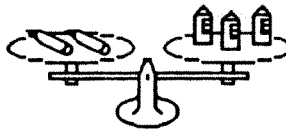
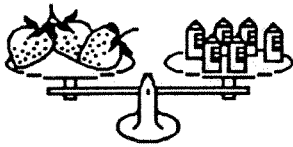
★★★ 5. If you can read this message, then perhaps you are clever enough to solve this problem:

If 2 boys and 2 girls were at a party and had to  
 dance, how many different dances were  
 scheduled so that each boy danced with each girl?

Answer: \_\_\_\_\_

★★★ 6. Find the weight of a pencil. The scale is set to measure grams.

Answer: \_\_\_\_\_ grams



★ 7. The collection of gears below has seven gears in all. If you turn the one with the handle in a clockwise direction, in which direction will the seventh gear turn?

Answer: \_\_\_\_\_

