

# MATH SUPERSTARS – 6

## Uranus, XVIII

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

(This shows my own thinking.)

- ★ 1. Hickory, dickory, dock  
The mouse ran up the clock.  
The clock struck four  
The mouse ran down.  
Hickory, dickory, dock.



If the clock strikes only on the hour, how many times will the clock strike before it strikes only four times again?

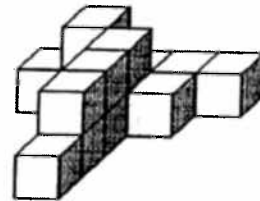
Answer: \_\_\_\_\_

- ★★ 2. What is the prime factorization of the number 30?

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

- ★★ 3. How many blocks are in the picture if each block sits on another and there are no hidden spaces?

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



- ★★ 4. Dan is painting letters on the side of a model truck. The letters on the real truck are 40 inches high. The model is  $\frac{1}{20}$  the size of the truck. How high should Dan make the letters on the model?

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

- ★★ 5. According to the *Guinness Book of World Records*, Michel Lotito is the world champion eater of metal and glass. Since 1966, he has eaten 10 bicycles, 7 TV sets, a Cessna airplane, and a metal coffin, among other things.

His doctors say he can eat up to 2 pounds of metal a day. At this rate, how long would it take him to eat a small car, which weighs about 1 ton?

Answer: \_\_\_\_\_ years and \_\_\_\_\_ days

★★ 6. Draw the 100th figure for the pattern below:



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

★★ 7. Write the number of things in a dozen. Multiply it by the number of inches in a foot. Multiply that by the number of months in a calendar year. Multiply that by the number of items in the set of numbers on a clock. Write your answer below.

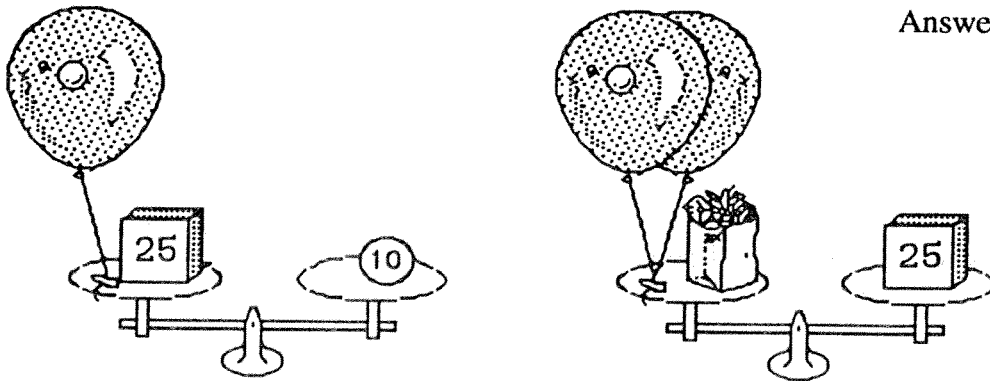
Answer: \_\_\_\_\_

★★ 8. One day Jimmy's teacher gave the class the correct answers to their math examples but she failed to put in the decimal points. Help Jimmy decide where to place the decimals by rounding off the numbers involved, and estimating. Place the decimal points in the proper place.

a)  $7.436 \times 3.89 = 2892604$

b)  $3.773 \div 0.98 = 385$

★★★ 9. Sheila bought a couple of identical helium balloons at the mall. She was testing out their "pull power" with her science kit, and found that one balloon and a 25-gram weight exactly balanced a 10-gram weight. Then she tested a bag of groceries, and found that the two balloons and bag of groceries exactly balanced the same 25-gram weight. Sheila said "Aha -- I know how much the groceries weigh." How much *do* the groceries weigh?



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

★★ 10. What would the next set of letters in this pattern be?

AN, bo, DQ, gt, \_\_\_\_\_, ...