

# MATH SUPERSTARS - 6

## Uranus, VIII

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

(This shows my own thinking.)

- ★ 1. What fraction is equivalent to  $\frac{4}{5}$  and has a denominator that is 4 more than its numerator?

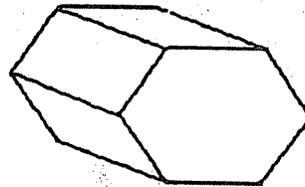
Answer: \_\_\_\_\_

- ★★★ 2. A man weighing 80 kg. and his two children, each weighing 40 kg., want to cross a river. Each can row the boat they must use. The boat can carry only 80 kg. What is the least number of crossings that can be made to get from one side of the river to the other? (A crossing means going from one side of the river to the other side -- not a round trip.)

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

- ★★★ 3. A hexagonal prism looks like the picture to the right. What is the total number of:

- a. *faces* on the shape? \_\_\_\_\_  
b. *edges* on the shape? \_\_\_\_\_  
c. *vertices* on the shape? \_\_\_\_\_



- ★★★ 4. Sarah's age is three times Anthony's age. Four years from now, Sarah will be twice as old as Anthony. How old is Sarah now?

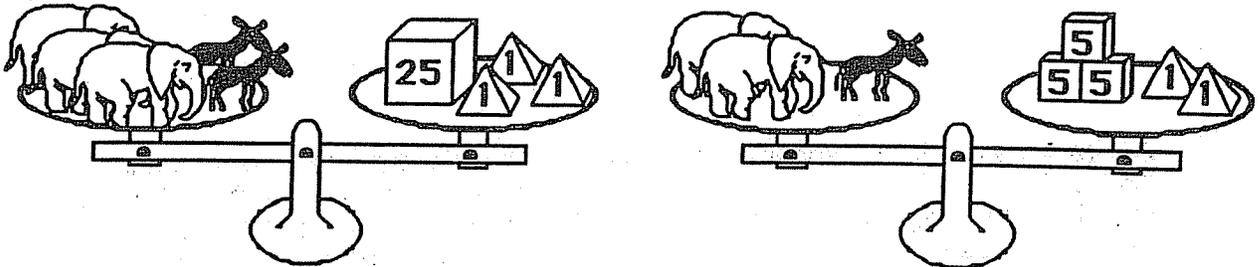
Answer: \_\_\_\_\_

- ★★★ 5. Diane counted 28 geese and horses on the farm. Altogether, there were 78 legs on all of the animals. How many were geese?

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

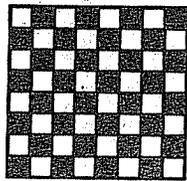
- ★ 6. In the space below, show how to combine six 1's so that their sum is 123.

- ★★ 7. Maria likes to weigh her toy animals. She found that the animals below balanced the gram weights in her science kit. Three elephants and 2 donkeys balanced 28 grams; two elephants and 1 donkey balanced 17 grams. Maria says she can now tell how much both animals weigh. Are you as clever as Maria?



Answer: An elephant is \_\_\_\_\_ grams; a donkey is \_\_\_\_\_ grams.

- ★★ 8. A checkerboard is made from a number of small squares. Four of the small squares can be grouped so that a larger square is formed. Nine of the small squares can be grouped so that even a larger square is formed. This process can be continued, up to all 64 small squares making one huge squares. How many squares altogether can be formed on a checkerboard?



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

- ★★ 9. Thomas works for his dad. He was given the choice of:  
 (a) working for 25 days at \$15.00 per day, or  
 (b) working for 25 days and doubling his wages every day, beginning with 1¢ the first day, 2¢ the second day, 4¢ the third day, 8¢ the fourth day, etc.

Which choice, (a) or (b), will give Thomas the greater pay and how much more pay than the other choice?

Answer: Choice \_\_\_\_\_ will give him \$ \_\_\_\_\_ more.