

# SUPERSTARS III

*Pluto, VIII*

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

*(This shows my own thinking.)*

- ★★★1. The faces on a regular die are numbered 1 through 6. What is the probability of rolling three four's in succession? Give your answer as a common fraction.

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

- ★★2. Two girls each had a different number of bracelets. Joyce said, "If you give me 8, I'll have as many as you." Leslie replied, "If you give me 8, I'll have twice as many as you." How many did each have?

Answer: Joyce has \_\_\_\_\_ bracelets.  
Leslie has \_\_\_\_\_ bracelets.

- ★★3. How many different 3-digit numbers can you write using the numbers shown below only one time in each number?

2 4 7 9

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

- ★★★4. Karch gave  $\frac{1}{2}$  of his stamp collection to AJ. Then he gave  $\frac{3}{4}$  of the remaining stamps to Ricci. If he ended up with 12 stamps, how many did he have when he started?

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

- ★★★★5. The Hi-N-Dry Volleyball Company has exclusive rights to make a waterproof volleyball for games at the beach. The company controls the shipment of its balls with a special code. Last week's shipment consisted of 20 cartons -- the first five cartons are numbered in this way: 04343, 08686, 13029, 17372, and 21715. The last 2 cartons shipped were 82517 and 86860. The company is in a panic because every carton that began and ended with an even digit has been lost. How many cartons have been lost and what are the carton numbers?



Answer: a. \_\_\_\_\_ cartons were lost.  
b. The lost numbers were: \_\_\_\_\_

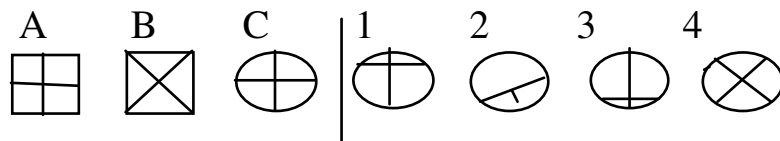
- ★6. You have yarn that is 8 yards long. If it takes you 1 second to make each cut, how long will it take you to cut the yarn into 1 foot pieces ?

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

- ★7. The results from a recent survey show that the most popular magazines among men are *Sports Illustrated*, *GQ*, and *Consumer Reports*. Of the men surveyed, 13 subscribe to *GQ* only, 28 to *Sports Illustrated* only, and 19 to *Consumer Reports* only. The survey shows that, of the men who take two magazines only, 17 take both *GQ* and *Sports Illustrated*, 21 take both *Sports Illustrated* and *Consumer Reports*, and 13 take both *GQ* and *Consumer Reports*. Fourteen men subscribe to all 3 magazines. How many men were surveyed?

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

- ★8. Figure A changes to B as C changes to:



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

- ★★ 9. Mentally find the product of  $2 \times 48 \times 50$ . When you turn in your paper, you will have a problem like this to do in your head.

Answer to later problem: \_\_\_\_\_

- ★★★10. Find the area of a soccer field outside the center circle if the field is 100 m by 50 m and the diameter of the center circle is 15 m.

Answer: \_\_\_\_\_ m<sup>2</sup>



- ★★11. Write an equation for this situation, using  $h$  for the cost of 1 hot dog. Solve the equation.

An 8-pack of hot dogs and a jar of mayonnaise costs \$2.42.  
The mayonnaise is \$1.30. What is the cost of each hot dog?

Answer: An equation is: \_\_\_\_\_. The solution is:  $h =$  \_\_\_\_\_