

SUNSHINE MATH - 8

Pluto, XXIII

Name: _____

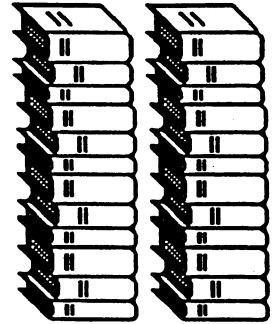
(This shows my own thinking.)

- ★★ 1. Mrs. Thomas had 12 math books in each of 2 stacks. Her young daughter was staying with her after school one day, so she gave her the challenge of putting the books in 3 stacks so that:

- the first stack had one less than the third stack, and
- the third stack had one less than the middle stack.

How many books should be in each stack?

Answer : 1st stack: ____ ; 2nd stack: ____ ; 3rd stack: ____



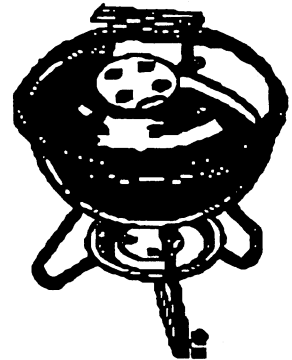
- ★★ 2. The Fahrenheit temperature (T) under the earth's surface is given by $T = 68 + 40k$, for each kilometer k in depth.

- What temperature would you find at the bottom of a 1-kilometer mine shaft?
- How far down would you have to go before you could boil water at 212°F ?

Answers: a. _____ b. _____

- ★ 3. Shania needs some ketchup for her family's barbecue. She's comparing prices at the store and finds that a 12-oz. bottle of ketchup is \$1.38 and an 8-oz. bottle is \$1.02. Which is the best buy?

Answer: _____ oz. bottle

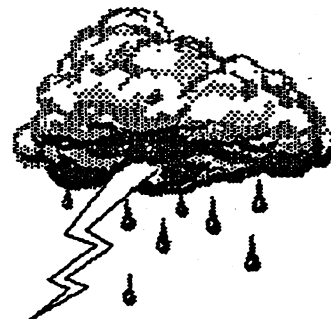


- ★★★★ 4. A compact disk has a $4\frac{1}{2}$ inch diameter. The outer non-playing margin is $\frac{1}{4}$ inch wide, and the non-playing central area is 1 inch in diameter. There are an average of 120 grooves per inch. What is the area of the playing section?

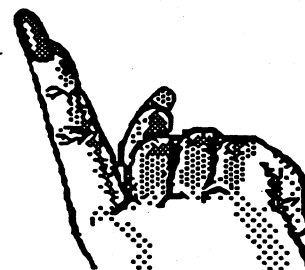
Answer : _____ sq. inches

- ★★ 5. The chance of rain on Saturday is given by the weatherman as 50%. The chance of rain on Sunday is also 50%. What is the chance that you will make it through the weekend without rain messing up your plans?

Answer : _____



- ★★ 6. Fingernails grow about 1.5 inches per year.
- Measure the length of your index fingernail. What is it?
 - Write an equation, using y for years, that tells how long (L) your fingernail will be y years from now.
 - The longest fingernail on record is 37 inches. How many years from today will it take for your fingernail to equal the record?



Answers: a. _____ inches b. $L =$ _____ c. _____ years

- ★★★ 7. Bees travel about one hundred forty thousand miles as they make a pound of honey. About three million pounds of honey are produced in the United States and Canada each year. Determine about how far bees had to travel to make all the honey in the United States and Canada in 1996. Write your answer in scientific notation.

Answer : _____ miles

- ★★ 8. The smallest bacteria that can be seen with an ordinary microscope is 0.00002 centimeters in length. Write this number in scientific notation.

Answer : _____ centimeters

- ★★★ 9. One of two 6-sided dice has a blank face rather than a face with 2 dots. The other die has a blank face rather than a face with 5 dots. What is the probability that a sum of seven appears when the dice are thrown?

Answer : _____

