

4. Rob wanted an allowance. His father gave him a choice of getting it on a weekly or on a daily basis. He said he would either pay him \$1.25 a week or pay him in the following manner for a week: On Monday he would give him \$0.01; on Tuesday \$0.02; on Wednesday \$0.04; and on through Sunday. What would you tell Rob to do so he can get more allowance?

Hint: Continue the pattern of doubling the number of cents through Sunday.

5. Suppose today is Tuesday. What day of the week is it 100 days from now?

Hint: Start by dividing 100 by 7 because every seventh day is a Tuesday.

6. Mr. Grimly rents apartments. He carefully keeps track of his building's daily use of kilowatt hours of electricity as he rents more and more apartments. Complete his table:

Renters	1	2	3	4	5	6	7	8	9	10
Kilowatt hours	2	5	7	10	12					

7. Art Ringwald's Auto World sent letters to 5,000 residents offering them the chance to win a free car. Art received 200 replies. A month later, he sent 6,000 letters and received 240 replies. If the pattern continues, how many replies can the company expect to receive if it sends 8,000 notices? \_\_\_\_\_

Hint: Figure the amount for 7,000 first.

8. Bill Phelps is a gas meter reader. It takes him 10 minutes to read 30 meters. He can read 60 meters in 20 minutes, and 90 meters in 30 minutes. If the pattern continues, how long does it take him to read 150 meters? \_\_\_\_\_

Hint: The key is "It takes him 10 minutes to read 30 meters."

9. The women who belong to the library book club met on May 17, June 14, and July 12. If this pattern continues, when is their next meeting? \_\_\_\_\_

Hint: Use a calendar.

10. Leonardo Fibonacci, an Italian mathematician who lived from about 1180 to 1250, found a pattern in numbers. Mathematicians are still discovering that this pattern can be seen in nature in the way things grow. Here is the pattern:

**0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233,** \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Do you recognize the pattern? What goes in the blanks?

11. As you come into the Museum of Technology, you notice a rocket on a platform that turns. The rocket always points north at 9 A.M.; east at 9:15 A.M.; south at 9:30 A.M.; west at 9:45 A.M.; and north again at 10 A.M. Which direction will it be pointing at 6:15 P.M., more than 9 hours later? \_\_\_\_\_

12. Can you solve this magic square?

Put the remaining numbers from 0 to 15 in the 16 small squares. The sum of the four numbers in each row, column, and two diagonals must be 30.

15			12
	10	9	
			11
3			0

13. Five friends exchange valentines on Valentine's Day. How many valentines are exchanged?

Hint: Start with a smaller number as an experiment. What if there were only one person? Then no valentines exchanged—zero. What if there were only two friends instead of five? Then there would be 2 valentines exchanged. Three friends—there would be 6 exchanged. Four friends—there would be 12.

What's the pattern? 0, 2, 6, 12,...? \_\_\_\_\_

14. What is the syllable pattern of this limerick, and what is the rhyme pattern? \_\_\_\_\_

There was an Old Man with a nose,  
Who said, "If you choose to suppose,  
That my nose is too long,  
You are certainly wrong!"  
That remarkable Man with a nose.

15. Cans of tuna are arranged in a display that has 4 rows. Each row has one more can than the row above it. If the last row has 10 cans, how many cans are in the display?