Write the number of calories c as a function of the diameter d of a pepperoni pizza.

Diameter	Calories
8"	955
10"	1493
12"	2150
14"	2926
16"	3821

1

Write the number of calories c as a function of the number of chai lattes, n, you consume.

Number of Beverages	Calories
1	194
2	388
3	582
4	776
5	970

2

Write the number of cookies c as a function of the number of children, n, sharing them.

Number of Children	Number of Cookies
1	12
2	6
3	4
4	3
6	2

3

Write the number of cases of soda needed, c, as a function of the number of rows, n, in a stack.

Number of Rows	Number of Cases
1	2
2	5
3	9
4	14
5	20

4

Write the rebound height of a ball, h, as a function of the number of times, n, the ball has bounced.

Number of Bounces	Ball Height
0	12
1	6
2	3
3	1.5
4	0.75

5

A book club has a one-time membership fee of $25. Members receive 20% off each purchase. Write the price, P, you will pay overall as a function of the amount, A, of your purchase before discount.

6

Your grandmother lives 200 miles away. Write the amount of time, t, it will take you to get to her house as a function of the speed, s, you drive.

7

You have $100 in your pocket. Gas costs $2.49 per gallon. Write the amount you have left as a function of the number of gallons of gas you buy.

8

On Day 0, you email a video to five of your friends. On Day 1, each of those friends forwards the video to 5 friends. On Day 2, each person who received the video on Day 1 does the same. Write the number of persons who have received the video as a function of the number of days since the video was posted.

9

The diameter of a vegetable can is the same as its height. Write the visible surface area of the can's label as a function of its diameter, d.

10

In *One Hundred Hungry Ants* by Elinor J. Pinczes (1993), 100 ants are trying to get to a picnic. To travel faster they arrange themselves in lines, with each line having the same number of ants. Write the number of ants, A, per line as a function of the number of lines, L.

11

In *Bats on Parade* by Kathi Appelt (1999), the nth group of bats marches in a group of $n \times n$ bats plus a flag bearer. Write the number of animals A in a group as a function of the group number, n.

12

In *One Grain of Rice* by Demi (1997) a peasant girl, Rani, is rewarded for her honesty. She asks for 1 grain of rice on day 1, 2 grains on day 2, 4 grains on day 3, 8 grains on day 4, and so on. Write the number of grains of rice, G, that Rani receives on day d as a function of the day number.

13

In *The Twelve Circus Rings* by Seymour Chwast (1996), the first circus ring has 1 performer, the second ring has $2 + 1$ performers, the third has $3 + 2 + 1$ performers, and so on. Write the number of performers, p, as a function of the ring number n.

14

In *Math Curse* by Jon Scieszka and Lane Smith (1995), you are asked to estimate how many m&m's you need to measure the Mississippi River. Write the number of m&m's needed to measure a river, m, as a function of its length in miles, L. (Note: An m&m is about 1 cm in diameter.)

15