


13. The table on the back of a pattern package can be used to determine the number of yards of fabric needed to make a rabbit costume for a child.

	PATTERN 9810		Simplicity						
	Costumes have front zipper, long raglan sleeves, elastic sleeve and leg casings, hood. Fabrics: Fleece or suede								
	BODY MEASUREMENTS								
Chest (in.)	21	22	23	25	26	27	28½	29	30
Pattern Size	2	3	4	6	7	8	10	11	12
YARDAGE NEEDED									
Pattern Size	2-4	3-8	14-12						
Yards	2½	3½	4½						

- (a) How many yards of fabric are needed if the child's chest measures 29 inches?

- (b) In this exercise, one number is a function of a second number that depends, in turn, on a third number. Explain this dependence.

14. Marnie combined $f(x)$ and $g(x)$ as shown. Find her error and write a correct solution.

Problem

If $f(x) = x^2 + 2x + 1$ and $g(x) = 5x$, find $f(g(3))$.

Solution

$$\begin{aligned}
 g(3) &= 5(3) \\
 &= 15 \\
 f(g(3)) &= 15(x^2 + 2x + 1) \\
 &= 15x^2 + 30x + 15
 \end{aligned}$$

15. Create a question involving combinations of operations on functions, and then solve it. Exchange questions with a partner for checking.