Using Variables to Describe Patterns Worksheet

1. Janine wants to have helium-filled balloons delivered to the home of a sick friend. Each balloon costs $4. Delivery costs $5.

   a) Make a table to show the cost of having 1, 2, 3, and 4 balloons delivered.

   b) Write a pattern rule that relates the number of balloons to the total cost.

   c) Write an expression with a variable to represent the pattern.

   d) Use the expression to find the cost of having 9 balloons delivered.

2. Sue works at a flower stand. She earns $ 25.00 per day, plus $ 2.25 for every bouquet of flowers she sells.

   a) Make a table to show how much money Sue would earn if she sold 0, 1, 2, 3, and 4 bouquets of flowers per day.

   b) Write a pattern rule that relates money earned to the number of bouquets sold.

   c) Write an expression with a variable to represent the pattern.

   d) Use the expression to find how much money Sue would earn if she sold 8 bouquets of flowers on Saturday.

3. For each Table of Values, write an expression that relates the input to the output.

a)

Input	Output
24	10
22	9
20	8
18	7
16	6

b)

Input	Output
1	6
2	9
3	12
4	15
5	18

4. June is going to the amusement park with her friends.
She will pay $8 for admission, plus $2 for each ride she goes on.

a) Make a table to show how much June will pay
if she goes on 0, 1, 2, 3, and 4 rides.

b) Write a pattern rule that relates the amount June pays
to the number of rides she goes on.

c) Write an expression to represent the pattern.

d) Suppose June goes on 8 rides. How much will she pay?
Show your work using the expression

e) Suppose June paid $30. How many rides did she go on? **Show your work**