Remove the Question... Focus on the Situation

For each of the following situations:
- build or sketch a model for each situation
- record observations about the mathematical relationships
- write equations to describe the relationships
- ask and answer some questions about the situation

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1) Erin has 12 compact disks and Malia has 15 compact disks.

2) Rosa sold 7 packages of gift wrap to each of her 5 neighbors.

3) Julian built a rectangular pen for his dog. The perimeter of the pen is 48 feet and one dimension of the pen is 6 feet.

4) The 50 choir students rod in vans to the concert. Six students can ride in each van.

5) It takes 1/6 of a dozen eggs to make a gallon of ice cream. Gene has ¾ of a dozen eggs.

6) 2/3 of the earth's surface is covered by oceans and 1/10 is covered by glaciers.

7) Ted had no money left over after he spent ½ of his year's income on food and rent, 1/3 of his income on clothing, 1/12 on entertainment, and saved $1400.

8) 65% of the company's employees were women.

9) The school population this year in Alstown is 810, which is 135% of the school population for last year.

10) Based on his experiment. Nick says the probability of drawing a green tile out of his bag is 45%. There are 18 green tile in his bag.

Adapted from Visual Mathematics, Course 1 (Foreman & Bennett, 1995)

Silver and Smith (1990) have found that problems structured in this way foster high-level thinking by inviting students 1) to consider alternatives, 2) to analyze a simple situation and relate it to the mathematics they know, and 3) to propose problems that are interesting and complex.