

## Understanding Algebra

Write and turn in your response to the following question. Then we will discuss the question.

I went to Pompeii and bought the same number of salads and small pizzas. Salads cost two dollars each and pizzas cost six dollars each. I spent \$40 all together. Assume that the equation  $2S + 6P = 40$  is correct. Then,

$$2S + 6P = 40.$$

Since  $S = P$ , I can write

$$2P + 6P = 40.$$

So

$$8P = 40.$$

The last equation says 8 pizzas is equal to \$40 so each pizza costs \$5.

What is wrong with the above reasoning? Be as detailed as possible. How would you try to help a student who made this mistake?