Math Diversion 965

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First things first...But not necessarily in that order.
— Doctor Who

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Source: https://www.algebra.com/algebra
Title: Question 377832: A Mixed-Rate Problem
 Presenter: Patrick
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1 Problem

A bag of peanuts is worth \$0.28 less than the same size bag of cashews. Equal amounts of peanuts and cashews are used to make 45 bags of a mixture that sells for \$1.25 per bag. How much is a bag of cashews worth? (Give your answer to the nearest cent.)

2 Solution

We'll begin by providing symbols for the price per bag of peanuts and cashews, being R_p and R_c, respectively. But we have been given that $R_p = R_c - .28$ (in dollars). And now the figure.

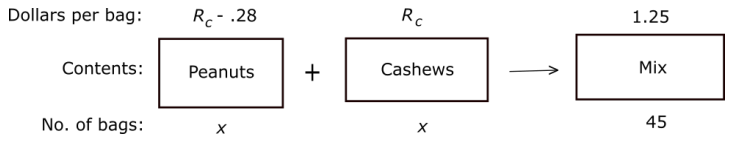

Figure 2. We need two equations to solve for is x and R_c.

Now, we balance on overall number of bags:

$$x + x = 45\,. \tag{1a}$$

And on the overall dollars from the unmixed nuts to the mixed nuts:

$$(R_c - .28)x + (R_c)x = (1.25)45\,. \tag{1b}$$

Wolframalpha.com gives as solutions for (1a) and (1b) as $R_c = \$1.39$.