Math Diversion Problem 761

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With me, everything turns into mathematics.
— Rene Descartes
(P.S. I calculate; therefore I am.)

The material here is found at:

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Source: https://www.algebra.com
Title: Question 224473
 Presenter: Patrick
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1 The Problem

Question 224473: Three skilled laborers a, b, and c can do a job in 20 days. Just a and b can do the job in 30 days. Just b and c can do the job in 40 days. What are their individual rates in units job/days?

2 The Solution

Let $x = R_a$, $y = R_b$, $z = R_c$. Then we get the three equations:

$$20(x + y + z) = 1\,, \tag{1a}$$
$$30(x + y) = 1\,, \tag{1b}$$
$$40(y + z) = 1\,. \tag{1c}$$

Solving these together [using wolframalpha.com], we get

$$R_a = 1/40 \text{ [job/day]}\,,$$
$$R_b = 1/120 \text{ [job/day]}\,,$$
$$R_c = 1/60 \text{ [job/day]}\,.$$