

Math Diversion Problem 876

P. Reany

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What is wisdom? Wisdom is knowing what
to do when the rules don't apply.

— Jamie Edwards
[Healthy Developer]

Source: <https://www.youtube.com/shorts/uSYDKq7ojQw>

Title: A percentage problem.

Presenter: SAFALATA Ek Target

1 Problem

If $x\%$ of a is the same as $y\%$ of b , then $z\%$ of b will be what?

2 Solution

The first thing to notice is that we're not going to get a number for an answer. The answer will likely be in terms of x , y , a , because those are amounts we were given to work with.

So, ' $x\%$ of a is the same as $y\%$ of b ' translates to

$$\frac{x}{100} \times a = \frac{y}{100} \times b, \quad (1)$$

Solving this for b , we get

$$b = \frac{ax}{y}. \quad (2)$$

Hence, ' $z\%$ of b ' is either

$$z\% \text{ of } b = z\% \frac{ax}{y}, \quad (3)$$

or

$$z\% \text{ of } b \sim \frac{axz}{100y}. \quad (4)$$