Answer on question 34089 – Math – Algebra

Use System of Equations in answering

Irene sells two brands of Tablet PC. She receives a commission of 12% on one brand and 8% on the other brand. If she is able to sell 2 Tablet PC's, one for each brand, the total cost is Php 42, 000 and the amount that she will receive as commission is Php 4, 400.

      a. What is the cost of each brand of Tablet PC's?

      b. How much commission does she receive on one brand?

How about on the other brand?

c. Suppose you are Irene and you wish to earn more. Which Tablet PC will you ask the customers or clients to buy? Why?

Solution

Let x is the price of the first tablet and y is the price of the second. The we get the system of equations

$$\begin{cases} x + y = 42{,}000 \\ 0.12x + 0.08y = 4{,}400 \end{cases} \Rightarrow \begin{cases} x = 42000 - y \\ 5040 - 0.12y + 0.08y = 4400 \end{cases}$$

$$0.04y = 640$$

$$y = 16000, x = 26000$$

The commission from the first brand is $0.12 * 26000 = 3120$, and from the second brand $0.08 * 16000 = 1280$.

If I were Irene I would ask the customer to buy the tablet of the first brand, because the commission is lager.

Answer: a. 26000 and 16000; b. 3120 and 1280; c. the first one.