Answer on Question #37083 – Math – Algebra

Question.

Albert is 7 years older than Bob. Four years ago Albert was twice as old as Bob. Find the age of Bob in five years' time. (Assuming that age of Albert is x years now.)

Solution.

Let

x - age of Albert now.

y- age of Bob now.

Albert is 7 years older than Bob:

$$x - 7 = y.$$

Four years ago Albert was twice as old as Bob. Find the age of Bob in five years' time:

$$x - 4 = 2y.$$

So, we have the system of 2 equations:

$$\begin{cases} x - 7 = y \\ x - 4 = 2y \end{cases}$$

Substitute the first eq. in the second eq.:

$$x - 4 = 2(x - 7) \to x - 4 = 2x - 14 \to x = 10.$$

We obtain that $x = 10$ (age of Albert) and $y = 3$ (age of Bob).