

Answer on Question #77374 – Math – Algebra

1) $v = v_0 + a * \frac{1}{6}$; $a * \frac{1}{6} = 50 - 30 = 20$; $a = 120$.

Answer: $a = 120$.

2) It is given a function $f(t) = g(t) - h(t)$, $t \in [0, n]$,
 $f(t_0) = f(t_n) = 0$

If runners move with the same speed all the time, then it is true that they have the same speed during the race. If the speed of runners differ, because when one of them increased distance to another one, his speed (v_1) was greater than the speed of the second runner (v_2), namely $v_1 > v_2$. Whereas they finished together, then with a decline of v_1 , its value was approaching to v_2 , until at a certain point of time $v_1 = v_2$.