

Answer on Question #53322 – Math – Algebra

Question

Find the value of D given the following facts:

$$\begin{cases} A = 2B + 1 \\ C = 4 \\ B = 3 + C \\ D = A - C. \end{cases}$$

Solution

From the second and the third equations of the system ($C = 4$ and $B = 3 + C$ respectively) we obtain that

$$B = 3 + C = 3 + 4 = 7.$$

Substitute for B into the first equation of the system ($A = 2B + 1$). Then

$$A = 2B + 1 = 2 \cdot 7 + 1 = 15.$$

Substitute for A and C into the fourth equation of the system ($D = A - C$).

$$\text{Therefore } D = A - C = 15 - 4 = 11.$$

Answer. 11.