

Answer on Question#39628 – Math – Algebra

Question.

The difference between the ages of two cousins is 10 years. 15 years ago, if the elder one was twice as old as the younger one, find their present ages.

Solution.

Cousin 1 – x.

Cousin 2 – y.

The difference between the ages of two cousins is 10 years:

$$x - y = 10$$

15 years ago, if the elder one was twice as old as the younger one:

$$x - 15 = 2(y - 15)$$

So, we obtain the system of two equations:

$$\begin{cases} x - y = 10 \\ x - 15 = 2(y - 15) \end{cases} \rightarrow$$

$$10 + y - 15 = 2(y - 15) \rightarrow y = 25 \rightarrow$$

$$x = 35$$

Answer.

Cousins present ages are 25 and 35 years.