

Answer on question 38773 – Math – Algebra

Beka and Melanie have 28 coins that are nickels and dimes. If the value of the coins is \$1.95 how many nickels do they have?

Let x = number of nickels

Let y = number of dimes

Girls have 28 coins, so we get first equation: $x + y = 28$. The value of nickels is $\$0.05x$, and the value of dimes is $\$0.1y$. Add them

$$0.05x + 0.1y = 1.95$$

Multiplying this equation by 20 we get

$$x + 2y = 39$$

$$x = 39 - 2y$$

Substitute this into first equation

$$39 - 2y + y = 28$$

$$y = 11$$

$$x = 28 - y = 17$$

Answer: 17 coins.