

Pluto Math

Pluto's inhabitants use the same mathematical operators that we do (+, −, etc.). They also use an operator, @, that we do not know. The following are true for any real numbers x and y :

$$x @ 0 = x$$

$$x @ y = y @ x$$

$$(x + 1) @ y = (x @ y) + y + 1$$

What is the value of $12 @ 5$?