

Function Notation: Smart Home Market Research

The following data was taken from the Statista website report on the Smart Home market on Jan 30, 2018: <https://www.statista.com/outlook/279/109/smart-home/united-states#market-users>.

The number of Smart Homes in the U.S. continues to increase. Market research provides the following data and projections for the number and percentage of U.S. homes (in millions) with devices in the various segment of the market.

Let t be the number of years since 2016.

$A(t)$ = millions of U.S. Households with Smart Appliances

$S(t)$ = average revenue (in dollars) per household with a Security Device

$E(t)$ = percentage of U.S. Households with Energy Management Devices

t	0	1	2	3	4	5	6
$A(t)$	10.65	13.98	17.86	22.12	26.71	31.70	37.13
$S(t)$	192.47	198.17	198.44	195.92	195.13	190.65	198.27
$E(t)$	7.78	10.00	12.53	15.20	17.95	20.79	23.74

Find and explain the meaning of $A(3)$.

Find and explain the meaning of $S(4)$.

Find and explain the meaning of $E(0)$.

Find and explain the meaning of $E(t) = 17.95$.

Find and explain the meaning of $A(t) < 25$.