

18. Doris decided to start a stamp collection. She hopes to triple the total number of stamps that she has in her collection each year. If she has 3 stamps when she starts her collection, which sequence represents the number of stamps she wants to have in her collection each year?

- A. 3, 9, 27, 54, 108, ...
- B. 3, 9, 15, 21, 27, ...
- C. 3, 6, 9, 12, 15, ...
- D. 3, 9, 27, 81, 243, ...

19. A station wagon was purchased for \$23,995 from a local dealership. Due to wear and tear, the value of the station wagon is expected to depreciate by 17% annually. If t represents the time, in years, since the station wagon was purchased, which of the following expressions describes the value of the station wagon t years after it was purchased?

- A. $23,995 \cdot 0.17^t$
- B. $23,995 \cdot 0.83^t$
- C. $23,995^{0.17t}$
- D. $23,995^{0.83t}$

20. In the geometric sequence shown below, a_n represents the n th term of the sequence.

a_n	Value
a_1	1
a_2	4
a_3	16
a_4	64
a_5	256

What is the recursive formula of the geometric sequence?

- A. $a_n = (a_{n-1})^2$
- B. $a_n = a_{n-1} + 3$
- C. $a_n = 2a_{n-1}$
- D. $a_n = 4a_{n-1}$