



Graphing Exponential Functions: Identifying Data that Display Exponential Behavior

The number of bacteria in a dish can be represented by the equation $y = 30(2)^t$, where y is the number of bacteria in t hours.

After 5 hours there are bacteria in the dish.



An amount of AED 8,000 was invested at 6% interest that is compounded yearly. The equation

$A = 8,000(1.06)^t$ represents the value A of the investment at time t years.

Find the worth of the investment when $t = 7$. Round your answer to the nearest thousand.

Enter your answer in the space provided.

The investment will be worth about AED after 7 years.

The population of a city can be represented by the equation $P = 90,000(0.98)^t$, where P is the population at time t years.

Find the population when $t = 9$. Round your answer to the nearest thousand.

Enter your answer in the space provided.

The population of the city will be about after 9 years.



An amount of AED 1,000 was invested at 3% interest that is compounded yearly. The equation

$A = 1,000(1.03)^t$ represents the value A of the investment at time t years.

Find the worth of the investment when $t = 31$. Round your answer to the nearest hundred.

Enter your answer in the space provided.

The investment will be worth about AED after 31 years.

The population of a city can be represented by the equation $P = 24,000(0.97)^t$, where P is the population at time t years.

Find the population when $t = 6$. Round your answer to the nearest thousand.

Enter your answer in the space provided.

The population of the city will be about after 6 years.



An amount of AED 3,000 was invested at 5% interest that is compounded yearly. The equation

$A = 3,000(1.05)^t$ represents the value A of the investment at time t years.

Find the worth of the investment when $t = 23$. Round your answer to the nearest thousand.

Enter your answer in the space provided.

The investment will be worth about AED after 23 years.