Exponential Functions: Growth & Decay · 1

A car costs $35000. Its value decreases by 18% each year. What is its value after 9 years, in dollars?

Exponential Functions: Growth & Decay · 2

The population of a town is modeled by $y = 3000(0.71)^t$, where t is in years. By what percent does it decrease each year?

Exponential Functions: Growth & Decay · 3

A town has 5300 people. Its population grows by 3% each year. What will the population be after 9 years?

Exponential Functions: Growth & Decay · 4

A town has 7600 people. Its population grows by 2% each year. What will the population be after 6 years?

Exponential Functions: Growth & Decay · 5

The value of a car is modeled by $y = 8100(1.02)^t$, where t is in years. By what percent does it increase each year?

Exponential Functions: Growth & Decay · 6

A town has 8000 people. Its population grows by 2% each year. What will the population be after 5 years?

Exponential Functions: Growth & Decay · 7

A car costs $33000. Its value decreases by 13% each year. What is its value after 7 years, in dollars?

Exponential Functions: Growth & Decay · 8

The number of fish in a lake is modeled by $y = 5100(0.90)^t$, where t is in years. By what percent does it decrease each year?

Exponential Functions: Growth & Decay · 2

ANSWER

29%

Exponential Functions: Growth & Decay · 1

ANSWER

5867

Exponential Functions: Growth & Decay · 4

ANSWER

8559

Exponential Functions: Growth & Decay · 3

ANSWER

6915

Exponential Functions: Growth & Decay · 6

ANSWER

8833

Exponential Functions: Growth & Decay · 5

ANSWER

2%

Exponential Functions: Growth & Decay · 8

ANSWER

10%

Exponential Functions: Growth & Decay · 7

ANSWER

12449

Exponential Functions: Growth & Decay · 9

A town has 3500 people. Its population grows by 3% each year. What will the population be after 8 years?

Exponential Functions: Growth & Decay · 10

A town has 2400 people. Its population grows by 7% each year. What will the population be after 6 years?

Exponential Functions: Growth & Decay · 11

The value of an investment is modeled by $y = 200(1.28)^t$, where t is in years. By what percent does it increase each year?

Exponential Functions: Growth & Decay · 12

A car costs $38000. Its value decreases by 9% each year. What is its value after 3 years, in dollars?

Exponential Functions: Growth & Decay · 13

A car costs $24000. Its value decreases by 21% each year. What is its value after 8 years, in dollars?

Exponential Functions: Growth & Decay · 14

The population of a town is modeled by $y = 7100(0.70)^t$, where t is in years. By what percent does it decrease each year?

Exponential Functions: Growth & Decay · 15

A town has 4900 people. Its population grows by 3% each year. What will the population be after 3 years?

Exponential Functions: Growth & Decay · 16

A town has 5700 people. Its population grows by 6% each year. What will the population be after 7 years?

Exponential Functions: Growth & Decay · 10

ANSWER

3602

Exponential Functions: Growth & Decay · 9

ANSWER

4434

Exponential Functions: Growth & Decay · 12

ANSWER

28636

Exponential Functions: Growth & Decay · 11

ANSWER

28%

Exponential Functions: Growth & Decay · 14

ANSWER

30%

Exponential Functions: Growth & Decay · 13

ANSWER

3641

Exponential Functions: Growth & Decay · 16

ANSWER

8571

Exponential Functions: Growth & Decay · 15

ANSWER

5354

Exponential Functions: Growth & Decay · 17

The number of fish in a lake is modeled by $y = 3800(1.23)^t$, where t is in years. By what percent does it increase each year?

Exponential Functions: Growth & Decay · 18

A town has 5700 people. Its population grows by 2% each year. What will the population be after 6 years?

Exponential Functions: Growth & Decay · 19

A town has 4400 people. Its population grows by 3% each year. What will the population be after 5 years?

Exponential Functions: Growth & Decay · 20

The value of a car is modeled by $y = 1100(1.31)^t$, where t is in years. By what percent does it increase each year?

Exponential Functions: Growth & Decay · 21

A town has 2900 people. Its population grows by 8% each year. What will the population be after 4 years?

Exponential Functions: Growth & Decay · 22

A town has 7200 people. Its population grows by 7% each year. What will the population be after 9 years?

Exponential Functions: Growth & Decay · 23

The population of a town is modeled by $y = 7500(0.96)^t$, where t is in years. By what percent does it decrease each year?

Exponential Functions: Growth & Decay · 24

A car costs $16000. Its value decreases by 14% each year. What is its value after 3 years, in dollars?

Exponential Functions: Growth & Decay · 18

ANSWER

6419

Exponential Functions: Growth & Decay · 17

ANSWER

23%

Exponential Functions: Growth & Decay · 20

ANSWER

31%

Exponential Functions: Growth & Decay · 19

ANSWER

5101

Exponential Functions: Growth & Decay · 22

ANSWER

13237

Exponential Functions: Growth & Decay · 21

ANSWER

3945

Exponential Functions: Growth & Decay · 24

ANSWER

10177

Exponential Functions: Growth & Decay · 23

ANSWER

4%