Exponential Functions: Growth & Decay · 1

$f(x) = 16\left(\frac{1}{2}\right)^x$. Find f(3).

Exponential Functions: Growth & Decay · 2

The population of a town is modeled by $y = 7300(1.03)^t$, where t is in years. By what percent does it increase each year?

Exponential Functions: Growth & Decay · 3

A town has 8800 people. Its population grows by 3% each year. What will the population be after 3 years?

Exponential Functions: Growth & Decay · 4

$f(x) = 3(4)^x$. Find f(3).

Exponential Functions: Growth & Decay · 5

The population of a town is modeled by $y = 2400(1.13)^t$, where t is in years. By what percent does it increase each year?

Exponential Functions: Growth & Decay · 6

A town has 3300 people. Its population grows by 6% each year. What will the population be after 10 years?

Exponential Functions: Growth & Decay · 7

$f(x) = 32\left(\frac{1}{2}\right)^x$. Find f(4).

Exponential Functions: Growth & Decay · 8

The population of a town is modeled by $y = 4000(1.12)^t$, where t is in years. By what percent does it increase each year?

Exponential Functions: Growth & Decay · 2

ANSWER

3%

Exponential Functions: Growth & Decay · 1

ANSWER

2

Exponential Functions: Growth & Decay · 4

ANSWER

192

Exponential Functions: Growth & Decay · 3

ANSWER

9616

Exponential Functions: Growth & Decay · 6

ANSWER

5910

Exponential Functions: Growth & Decay · 5

ANSWER

13%

Exponential Functions: Growth & Decay · 8

ANSWER

12%

Exponential Functions: Growth & Decay · 7

ANSWER

2

Exponential Functions: Growth & Decay · 9

A car costs $38000. Its value decreases by 19% each year. What is its value after 8 years, in dollars?

Exponential Functions: Growth & Decay · 10

$f(x) = 4(3)^x$. Find $f(1)$.

Exponential Functions: Growth & Decay · 11

The population of a town is modeled by $y = 6500(1.06)^t$, where t is in years. By what percent does it increase each year?

Exponential Functions: Growth & Decay · 12

A town has 2000 people. Its population grows by 2% each year. What will the population be after 9 years?

Exponential Functions: Growth & Decay · 13

A car costs $23000. Its value decreases by 14% each year. What is its value after 10 years, in dollars?

Exponential Functions: Growth & Decay · 14

The number of fish in a lake is modeled by $y = 1200(0.83)^t$, where t is in years. By what percent does it decrease each year?

Exponential Functions: Growth & Decay · 15

A car costs $29000. Its value decreases by 18% each year. What is its value after 4 years, in dollars?

Exponential Functions: Growth & Decay · 16

A town has 8300 people. Its population grows by 7% each year. What will the population be after 4 years?

Exponential Functions: Growth & Decay · 10

ANSWER

12

Exponential Functions: Growth & Decay · 9

ANSWER

7041

Exponential Functions: Growth & Decay · 12

ANSWER

2390

Exponential Functions: Growth & Decay · 11

ANSWER

6%

Exponential Functions: Growth & Decay · 14

ANSWER

17%

Exponential Functions: Growth & Decay · 13

ANSWER

5090

Exponential Functions: Growth & Decay · 16

ANSWER

10880

Exponential Functions: Growth & Decay · 15

ANSWER

13112

Exponential Functions: Growth & Decay · 17

The value of an investment is modeled by $y = 1100(1.06)^t$, where t is in years. By what percent does it increase each year?

Exponential Functions: Growth & Decay · 18

A town has 6400 people. Its population grows by 6% each year. What will the population be after 5 years?

Exponential Functions: Growth & Decay · 19

$f(x) = 6(4)^x$. Find $f(2)$.

Exponential Functions: Growth & Decay · 20

The population of a town is modeled by $y = 8400(1.13)^t$, where t is in years. By what percent does it increase each year?

Exponential Functions: Growth & Decay · 21

A car costs $27000. Its value decreases by 14% each year. What is its value after 7 years, in dollars?

Exponential Functions: Growth & Decay · 22

$f(x) = 2(2)^x$. Find $f(3)$.

Exponential Functions: Growth & Decay · 23

The population of a town is modeled by $y = 8200(0.70)^t$, where t is in years. By what percent does it decrease each year?

Exponential Functions: Growth & Decay · 24

A car costs $27000. Its value decreases by 17% each year. What is its value after 6 years, in dollars?

Exponential Functions: Growth & Decay · 18

ANSWER

8565

Exponential Functions: Growth & Decay · 17

ANSWER

6%

Exponential Functions: Growth & Decay · 20

ANSWER

13%

Exponential Functions: Growth & Decay · 19

ANSWER

96

Exponential Functions: Growth & Decay · 22

ANSWER

16

Exponential Functions: Growth & Decay · 21

ANSWER

9394

Exponential Functions: Growth & Decay · 24

ANSWER

8827

Exponential Functions: Growth & Decay · 23

ANSWER

30%