Exponential & Logarithmic Models · 1

Evaluate $\log_2(24) + \log_2(4) - \log_2(3)$.

Exponential & Logarithmic Models · 2

Evaluate $\log_4(384) - \log_4(6)$.

Exponential & Logarithmic Models · 3

A bacteria culture starts with 400 cells and doubles every 6 hours. How many cells are there after 24 hours?

Exponential & Logarithmic Models · 4

A sample of 80 mg of a substance has a half-life of 9 days. How many milligrams remain after 18 days?

Exponential & Logarithmic Models · 5

Solve for x: $2 \cdot 5^x = 10$

Exponential & Logarithmic Models · 6

$1000 is invested at 8% interest compounded annually. How much is in the account after 10 years? (nearest cent)

Exponential & Logarithmic Models · 7

Evaluate $\log_2(12) + \log_2(16) - \log_2(3)$.

Exponential & Logarithmic Models · 8

A sample of 80 mg of a substance has a half-life of 7 days. How many milligrams remain after 21 days?

Exponential & Logarithmic Models · 2

ANSWER

3

Exponential & Logarithmic Models · 1

ANSWER

5

Exponential & Logarithmic Models · 4

ANSWER

20

Exponential & Logarithmic Models · 3

ANSWER

6400

Exponential & Logarithmic Models · 6

ANSWER

2158.92

Exponential & Logarithmic Models · 5

ANSWER

x = 1

Exponential & Logarithmic Models · 8

ANSWER

10

Exponential & Logarithmic Models · 7

ANSWER

6

Exponential & Logarithmic Models · 9

Evaluate $\log_2(56) - \log_2(7)$.

Exponential & Logarithmic Models · 10

Solve for x: $7 \cdot 2^x = 448$

Exponential & Logarithmic Models · 11

$1200 is invested at 8% interest compounded annually. How much is in the account after 3 years? (nearest cent)

Exponential & Logarithmic Models · 12

$2000 is invested at 4% compounded continuously ($A = Pe^{rt}$). How much is in the account after 11 years? (nearest cent)

Exponential & Logarithmic Models · 13

A sample of 304 mg of a substance has a half-life of 10 days. How many milligrams remain after 40 days?

Exponential & Logarithmic Models · 14

Solve for x: $\log_3(x - 1) = 3$

Exponential & Logarithmic Models · 15

A sample of 56 mg of a substance has a half-life of 10 days. How many milligrams remain after 20 days?

Exponential & Logarithmic Models · 16

Evaluate $\log_2(96) - \log_2(6)$.

Exponential & Logarithmic Models · 10

ANSWER

$x = 6$

Exponential & Logarithmic Models · 9

ANSWER

3

Exponential & Logarithmic Models · 12

ANSWER

3105.41

Exponential & Logarithmic Models · 11

ANSWER

1511.65

Exponential & Logarithmic Models · 14

ANSWER

$x = 28$

Exponential & Logarithmic Models · 13

ANSWER

19

Exponential & Logarithmic Models · 16

ANSWER

4

Exponential & Logarithmic Models · 15

ANSWER

14

Exponential & Logarithmic Models · 17

Evaluate $\log_3(81) - \log_3(3)$.

Exponential & Logarithmic Models · 18

Solve for x: $2 \cdot 2^x = 8$

Exponential & Logarithmic Models · 19

$1200 is invested at 6% interest compounded annually. How much is in the account after 2 years? (nearest cent)

Exponential & Logarithmic Models · 20

$1000 is invested at 4% compounded continuously ($A = Pe^{rt}$). How much is in the account after 6 years? (nearest cent)

Exponential & Logarithmic Models · 21

A sample of 8 mg of a substance has a half-life of 2 days. How many milligrams remain after 2 days?

Exponential & Logarithmic Models · 22

Solve for x: $\log_3(x + 4) = 1$

Exponential & Logarithmic Models · 23

Evaluate $\log_4(256) - \log_4(4)$.

Exponential & Logarithmic Models · 24

Solve for x: $7 \cdot 2^x = 14$

Exponential & Logarithmic Models · 18

ANSWER

$x = 2$

Exponential & Logarithmic Models · 17

ANSWER

3

Exponential & Logarithmic Models · 20

ANSWER

1271.25

Exponential & Logarithmic Models · 19

ANSWER

1348.32

Exponential & Logarithmic Models · 22

ANSWER

$x = -1$

Exponential & Logarithmic Models · 21

ANSWER

4

Exponential & Logarithmic Models · 24

ANSWER

$x = 1$

Exponential & Logarithmic Models · 23

ANSWER

3