Bellwork

Use $f(x)$ to determine the transformations to $g(x)$. Then graph both equations. State the domain, range and asymptote of $g(x)$.

$$f(x) = 0.2^x$$

$$g(x) = 0.2^{x+1} + 3$$
Homework Answers

See Dukane
Unit 3
Exponential and Logarithmic Functions

Section 3.4:
Solving Equations

Objective: Students will be able to solve exponential and logarithmic equations.
Solving exponential equations by “taking the log of each side of the equation.”

Round to 3 places.

\[ 3^x = 11 \quad \text{and} \quad 16^x = 8 \]
Solving exponential equations by "change of base"

Round to 3 places.

\[3^x = 11\] \[16^x = 8\]
Solve the exponential equation algebraically. Round your result to three decimal places.

\[ 6^{5x-2} = 15 \]
Solve the exponential equation algebraically. Round your result to three decimal places.

\[ 2\left(3^{2t-5}\right) - 4 = 11 \]
Solve the exponential equation algebraically. Round your result to three decimal places.

Method 1:
Take ln of each side

\[ e^x = 29 \]

Method 2:
Change of base

\[ e^x = 29 \]
Solve the exponential equation algebraically. Round your result to three decimal places.

\[ 4e^{2x} = 5 \]
Solve the exponential equation algebraically. Round your result to three decimal places.

\[ 5e^{2x} - 10 = -2 \]
Summary...

What should you do if the variable is in the exponent?
Homework

Worksheet 3.4 Day 1

1-19 odds!!!