

Pre Cal 4 1 Graphing Exponential Functions And Constant e interpretation

Lesson 209 | Precalculus | Exponential functions and models

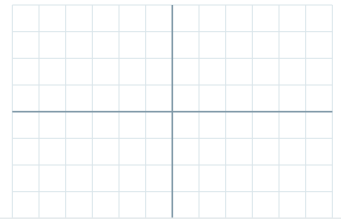
<https://www.youtube.com/watch?v=-GNegkKbRIw>

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

01

Graph $f(x) = 6^{(x - (-4))} + 6$. Give its asymptote, domain, range, and two points.

**02**

A population follows $P(t) = 300 \cdot 6^t$. Find $P(0)$, $P(2)$, and the multiplication factor per time unit.

03

A population follows $P(t) = 1300 \cdot 7^t$. Find $P(0)$, $P(2)$, and the multiplication factor per time unit.

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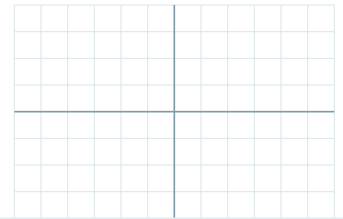
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Name: _____ Date: _____ Show your reasoning.

04

Graph $f(x) = 3^{(x - (-7))} + 11$. Give its asymptote, domain, range, and two points.

**05**

A population follows $P(t) = 1100 \cdot 3^t$. Find $P(0)$, $P(2)$, and the multiplication factor per time unit.

06

A population follows $P(t) = 600 \cdot 2^t$. Find $P(0)$, $P(2)$, and the multiplication factor per time unit.

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01

Graph $f(x) = 6^{(x - (-4))} + 6$. Give its asymptote, domain, range, and two points.

Shift $y=6^x$ horizontally by -4 and up 6. Asymptote $y=6$; domain all real x ; range $(6, \infty)$. Points $(-4, 7)$ and $(-3, 12)$.

02

A population follows $P(t) = 300 \cdot 6^t$. Find $P(0)$, $P(2)$, and the multiplication factor per time unit.

$P(0) = 300$; $P(2) = 10800$. Each increase of one in t multiplies the population by 6.

03

A population follows $P(t) = 1300 \cdot 7^t$. Find $P(0)$, $P(2)$, and the multiplication factor per time unit.

$P(0) = 1300$; $P(2) = 63700$. Each increase of one in t multiplies the population by 7.

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04

Graph $f(x) = 3^{(x - (-7))} + 11$. Give its asymptote, domain, range, and two points.

Shift $y=3^x$ horizontally by -7 and up 11. Asymptote $y=11$; domain all real x ; range $(11, \infty)$.
Points $(-7, 12)$ and $(-6, 14)$.

05

A population follows $P(t) = 1100 \cdot 3^t$. Find $P(0)$, $P(2)$, and the multiplication factor per time unit.

$P(0) = 1100$; $P(2) = 9900$. Each increase of one in t multiplies the population by 3.

06

A population follows $P(t) = 600 \cdot 2^t$. Find $P(0)$, $P(2)$, and the multiplication factor per time unit.

$P(0) = 600$; $P(2) = 2400$. Each increase of one in t multiplies the population by 2.