

1. Graph $f(x) = 7^x$

2. Graph $g(x) = 2 \cdot 7^{x-1} - 3$ by transforming the basic function $f(x) = 7^x$

Bonus Find the inverse of the function $g(x) = 2 \cdot 7^{x-1} - 3$

3. Graph $h(x) = \log_7(x + 2)$

4. Solve $\log_5(x-4) + \log_5(x+2) = \log_5(7)$ for x .

Bonus Solve for t : $A = P\left(1 + \frac{r}{m}\right)^{mt}$.

5. Solve $2 \cdot 7^{x-1} - 3 = 0$ for x . Give an exact answer and then round to 4 decimal places. If you use this to supply the x -intercept for the appropriate graph on Page 1, it's worth a couple bonus points.

6. Solve $7^{x-3} = 5^x$ for x . Give an exact answer and then round your answer to 4 decimal places.

7. Millsium has a half-life of 50 years, if I'm lucky. What's its decay rate?
8. Using your work from the previous problem, a very old sample of radioactive Wieligminium decayed from 20 grams to 3 grams. To the nearest *day*, how old is the sample?

9. Solve $(\log(x))^2 = \log(x^2)$ for x .

10. What's the future value of \$5,000 invested at 7% APR, if interest is compounded...

a. ... monthly?

b. ... daily?

c. ... continuously?