Compound interest formula:

$$\text{Future Value} = \text{Original value}\left(1+\frac{\text{interest}}{\text{number of compounding periods/yr}}\right)^{(\text{number of compounding periods/yr})(\text{time in years})}$$

$$A = P\left(1+\frac{i}{n}\right)^{nt}$$

$y = ac^{bx}$

Which is better, 4% compounded annually or 3.9% compounded monthly or 3.8% compounded weekly?

Any starting amount and any time.

$P = 100 \quad t = 1$

4%. $A = 100\left(1 + \frac{0.04}{1}\right)^{1(1)} = 104$

3.9%. $A = 100\left(1 + \frac{0.039}{12}\right)^{12(1)} = 103.97$

3.8%. $A = 100\left(1 + \frac{0.038}{52}\right)^{52(1)} = 103.87$

Increasing the number of compounding periods increases the interest but is not as significant as the interest rate.

p.97 #2-6

Quiz tomorrow
↳ using logs