

First tell Maple what the formula is. To Maple, **:=** means a definition, whereas **=** means an equation.

> **formula:=yt=a^t*y0+b*(1-a^t)/(1-a);**

$$\text{formula} := yt = a^t y0 + \frac{b(1-a^t)}{1-a}$$

Now recall we were using D instead of b and (1-i/12) instead of b. So substitute those in.

> **formula:=subs(b=D,formula);**

$$\text{formula} := yt = a^t y0 + \frac{D(1-a^t)}{1-a}$$

Warning! To Maple, **I** means sqrt(-1), so you have to use lower case **i**.

> **formula:=subs(a=1+i/12,formula);**

$$\text{formula} := yt = \left(1 + \frac{1}{12}i\right)^t y0 - \frac{12D \left(1 - \left(1 + \frac{1}{12}i\right)^t\right)}{i}$$

Use Maple's powerful algebraic skills to solve for D.

> **solve(formula,D);**

$$\frac{1}{12} \frac{i \left(yt - \left(1 + \frac{1}{12}i\right)^t y0 \right)}{-1 + \left(1 + \frac{1}{12}i\right)^t}$$

Plug in numbers. I used copy-paste to copy the blue formula above into the red line below.

> **subs(i=.03,yt=10000,t=24,y0=3000,1/12*i*(yt-(1+1/12*i)^t*y0)/(-1+(1+1/12*i)^t);**

275.8684851

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