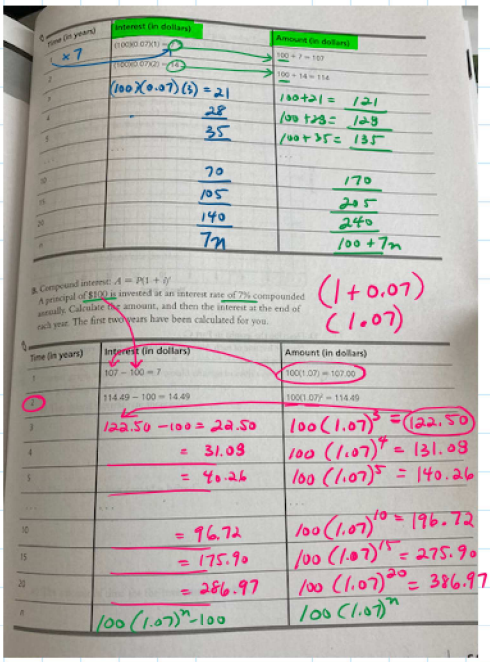
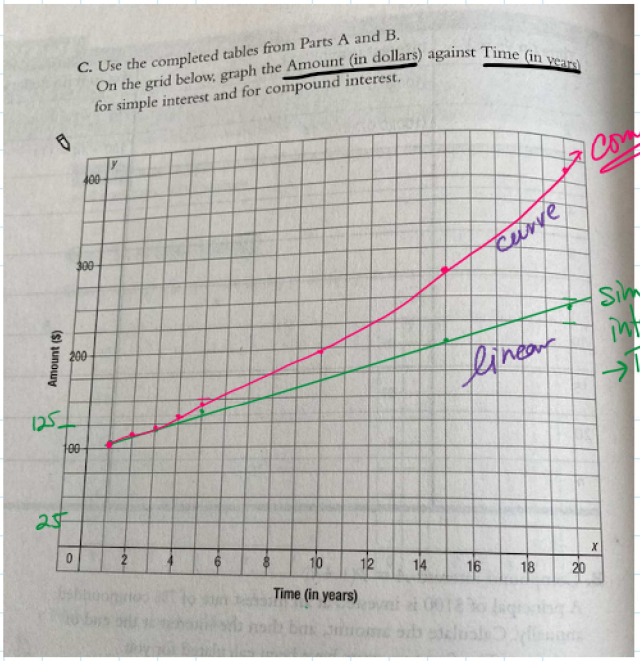
7.3 Math Lab - Compare Simple/Compound



B. Compound interest: $A = P(1 + i)^n$

A principal of $100 is invested at an interest rate of 7% compounded annually. Calculate the amount, and then the interest at the end of each year. The first two years have been calculated for you.

Time (in years)	Interest (in dollars)	Amount (in dollars)
1	107 − 100 = 7	100(1.07) = 107.00
2	114.49 − 100 = 14.49	100(1.07)² = 114.49
3	122.50 − 100 = 22.50	100(1.07)³ = 122.50
4	= 31.08	100(1.07)⁴ = 131.08
5	= 40.26	100(1.07)⁵ = 140.26
...		
10	= 96.72	100(1.07)¹⁰ = 196.72
15	= 175.90	100(1.07)¹⁵ = 275.90
20	= 286.97	100(1.07)²⁰ = 386.97
n	100(1.07)ⁿ − 100	100(1.07)ⁿ



C. Use the completed tables from Parts A and B. On the grid below, graph the Amount (in dollars) against Time (in years) for simple interest and for compound interest.

Amount ($)

Time (in years)

Compounded

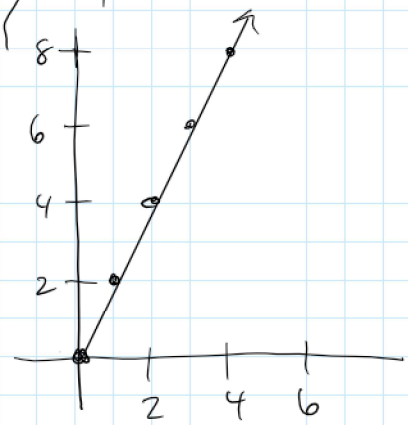
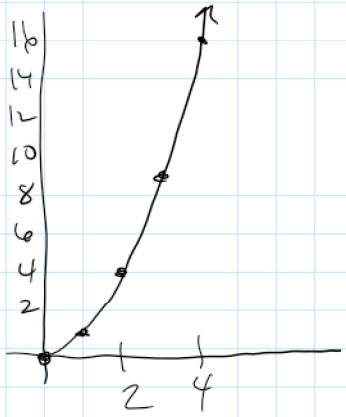
curve

Simple interest → TOTAL AMOUNT

linear

P. 645 #1, 2, 3

P642

Get Started

x	$y = 2x$	$y = x^2$
0	0	0
1	2	1
2	4	4
3	6	9
4	8	16