

1. The chart to the left shows the amount of money a person was paid per week. Use the chart to answer the following questions:

Week	Pay for the Week
0	\$0.10
1	\$0.20
2	\$0.40
3	\$0.80
4	\$1.60
5	\$3.20
6	\$6.40
7	\$12.80
8	\$25.60
9	\$51.20
10	\$102.40
11	\$204.80
12	\$409.60
13	\$819.20
14	\$1638.40
15	\$3276.80

a) What is the total amount of money made after 15 weeks?

b) What is the rate of increase each week?

c) How much would the person get paid for Week 16?

d) Write an exponential growth function to see how much money the person earned in week 20.

2. You just got a part summer job that will last for 12 weeks. They offer you two payment plans:

Plan A: They will pay you \$100 each week OR

Plan B: They will pay you \$0.10 the first week, \$0.20 the next week, \$0.40 the next week, and so on doubling your pay each week.

Which plan would you pick? Justify your answer mathematically.

3. The weight of a baby panda increases each week by 8%. If the baby panda weighs 4 pounds today, about how much will it weigh in 10 weeks?

4. Sally bought a brand new Mac computer. She paid \$2,800 for it. The computer depreciates at a rate of 11% a month. How much will the computer be worth in a year?

5. Fill in the following chart:

Formula	Growth/ Decay	Original Amount	Rate (as a Percent)	Time
$f(x) = 200(1.34)^5$				
$f(x) = \underline{\hspace{2cm}}(0.75)^3$	Decay	100		
	Growth	90	16%	20
$f(x) = 1500 (1 + 0.13)^{10}$				
$f(x) = \underline{\hspace{2cm}} (1 - 0.41)^6$	Decay	450		
$f(x) = 29 (1.28)^8$				
	Decay	1000	50%	4