1) Which number or variable represents the coefficient in the equation $y = (2 + .5)^x$

a) 2

b) X

c) 2.5

d) 1

2) Evaluate the expression: $(3 \cdot 2^6)^0 + 2^3 \cdot 4^1 - 3^0$

$1 + 8 \cdot 4 - 1$

a) 24

b) 32

c) 8

d) 43

3) Which equation represents the following situation?

Jan has an ant farm that is doubling the number of ants in it every 4 weeks. If she currently has 130 ants, how many ants did she have 28 weeks ago? (Round to the nearest ant).

a) $y = 130(1.5)^{-7}$

b) $y = 130(2)^7$

c) $y = 130(2)^{-4}$

d) $y = 130(2)^{-7}$

4) Ronnie has $100. He gets $20 from his "Gramma" every month. If he saves his money for 1 year, how much money will he have?

a) $360

b) $240

c) $120

d) $340

$y = 100 + 20x$

5) Jeff's mom has 100 pizzas. Every day she eats 40% of what is left. How many pizzas will she have left after 5 days?

a) ≈ **19** pizzas

b) ≈ 1 pizza

c) ≈ 8 pizzas

d) ≈ 6 pizzas

$y = 100(.6)^x$

6) The temperature outside is 7 degrees and every hour it dropped 2 degrees. How cold will it be in one day?

a) -4.2 degrees

b) -41 degrees

c) 55 degrees

d) 4.3 degrees

$y = 7 - 2x$

7) Charlie has 35 dinosaurs. He gets rid of two per day. How many will he have after a week?

a) ≈ 18 dinosaurs

b) ≈ 0 dinosaurs

c) 33 dinosaurs

d) 21 dinosaurs

$y = 35 - 2x$

8) Fanny the Granny made 6 dozen cookies. Every day she makes ½ dozen more. How many cookies will she have in 5 weeks?

a) 282 cookies

b) 21 cookies

c) 192 cookies

d) 46 cookies

$y = 72 + 6x$

9) You invest $8,600 in a bank with 5% interest compounded weekly. If you don't withdraw or deposit any money, how much did you have 17 years ago?

a) $8,181.17

b) $20,112.15

c) $3,752.15

d) $3,677.27

$8600\left(1 + \frac{.05}{52}\right)^{52 \cdot -17}$

10) Buddha had $4. He had his followers increase his amount of money by 70% every week. How much money does he have after 23 weeks?

a) $18.96

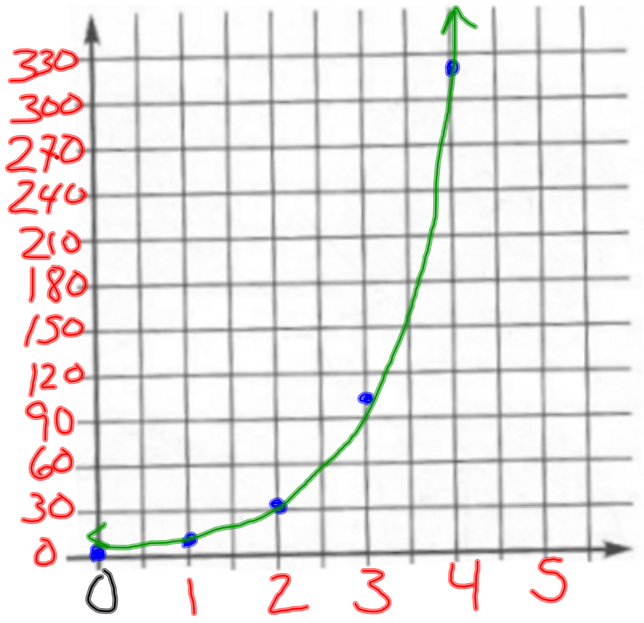
b) $14,615.21

c) $798,702.76

d) $35,282,292.68

$4(1.7)^{23}$

11) Graph the following equation: $y = 4(3)^x$



X	Y
0	4
1	12
2	36
3	108
4	324

12) If you have a choice of two different jobs, which would you choose from the following: Job 1 = $65,000 per year with and a raise of $750 each year. Job 2 = $60,000 per year and a raise of 2% per year. Which one would you choose and why?

It depends on how long you choose to stay at the job. If you don't plan on being there more than 10 years, then Job #1. If this is your dream profession, then choose Job #2 because in the long run, it will earn more money.

Job #1

$65,000 + 750x = y$

Year #1: $65,750

year #5: $68,750

year #10: $72,500

year #20: $80,000

Job #2

$60,000(1.02)^x = y$

year #1: $61,200

year #5: $66244.85

year #10: $73,139.67

year #20: $89,156.84