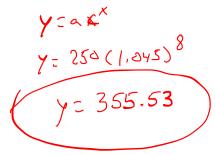
$$y = ac^{x}$$

$$x = years$$

$$y = noney$$

$$c = 4.5$$

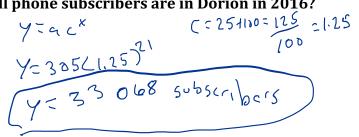
The annual interest rate is 4.5%. 100+4.5 1, 245 1. You start a bank account with \$250. How much money will be in the account after 8 years?



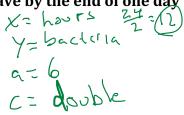
2. In 1995, there were 305 cell phone subscribers in the city of Dorion. $\chi = \gamma e^{-\zeta}$ The number of subscribers increased by 25% per year after 1995. $\gamma = 3000 \text{ GeV}$ How many cell phone subscribers are in Dorion in 2016?

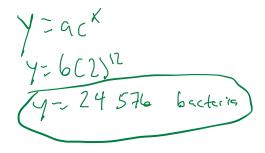
(225%





3. Bacteria can multiply at an alarming rate when each bacteria splits into two new cells. If we start with 6 bacteria, which can double every 2 hours, how many bacteria will we have by the end of one day (hint: first figure out how many times they double)?

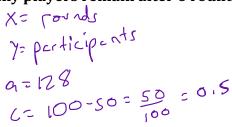


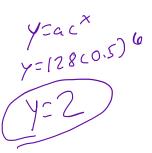


4. Each year, the city of Saint-Anne-de-Bellevue sponsors a tennis tournament. Play starts with 128 participants.

During each round, half of the players are eliminated.

How many players remain after 6 rounds?





- 5. The population of Vaudreuil can be modeled by $P = 6191(1.04)^x$, where x is the number of years since 2014.
 - a) What was the population in 2014?
 - b) By what percent should the population increase by each year?
 - c) What might the population of Vaudreuil be in 2020?



6. You have inherited land that was purchased for \$30,000 in 1960. The value of the land increased by approximately 4.5% per year. What is the approximate value of the land in the year 2016?

2016

ysac* y=30000(1.045)56 y=352 883.26 X = years Y = value Q = 30 000 Q = 100+4.5=1045=1.046

X= years Y= population

a= 6191

C = 45/2

1-950 2-950 C5 100-21=79 = 0.79

- 7. Nia buys a cell phone for \$ 950.00 in 2016 The phone loses 21 percent of its value every year.
 - a) After how many years will the value of Nia's phone first drop below \$200?
 - b) What year will it be?

$$\frac{x}{y}$$
 $\frac{y}{y} = \frac{950(0.74)^5}{y}$ $\frac{292}{y} = \frac{292}{292}$ $\frac{7}{182.44}$ $\frac{182.44}{y} = \frac{750}{182.44}$ $\frac{7}{182.44}$ $\frac{7}{182.44$

8. The foundation of a house has about 1,200 termites. The termite population grows at a rate of about 2.4% per day. How long will it take for the number of termites to double?

$$X = days$$
 $Y = terniteS$
 $Q = 1200$
 $C = 100 + 2.4 = 102.4 = 1.024$
 100
 100

1200 x 2 = 240b