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Alegbrea 1   Period 5

I.   The task at hand was to determine if Moore's law was actual accurate. I have
       determined that Moore's prediction regarding the processor speeds of game
       consoles is some what accurate. Overtime from the first game console to now
       the processor speeds have increased but not as much as Moore predicted it to
       be. The processor speeds of game console vary.

II.   The chart below shows game consoles and there VG years. VG years is the
       amount of years since 1977 when the first Atari game console came out. It also
       shows the predicted speed of the processor based on Moore's Law. Moore's law
       states that processor speeds will double every two years. The chart also includes
       the actual processor speed of the consoles.

| Console	VG Year	Mhz Predicted	MHz Actual
Atari 2600	0	1.2	1.2
Mattel Intellivision	2	2.4	0.9
Nintendo N.E.S	6	9.6	1.8
Sega Genesis	11	54.3	7.7
Super N.E.S	13	108.6	3.6
Atari Jaguar	14	153.6	26.6
Sony PlayStation	17	434.4	33.9
Nintendo 64	19	868.9	93.8
Sony PlayStation 2	23	3475.6	299
Nintendo GameCube	24	4915.2	486
Microsoft XBOX	24	4915.2	733
Microsoft XBOX 360	28	19660.8	3200
Sony PlayStation 3	29	27804.6	3200
Nintendo Wii	29	27804.6	729
Nintendo Wii U	35	222436.6	1240
PlayStation 4	36	444873.2	1600
PlayStation 4 Pro	39	889746.4	2100
XBOX One	36	444873.2	1750
XBOX One S	39	889746.4	1750
Nintendo Switch	40	889746.4	1020

Predicted Model- The equation below is the equation for the predicted processor speeds based on Moore's Law. In the equation t stands for time in VG years. The 1.2 is the starting processor speed from the Atari 2600, and the 2 is the doubling of the processor speed. Also the $\frac{t}{2}$ is the VG being divided by 2.

$$\underline{P(t)} = 1.2(2)^{\frac{t}{2}}$$
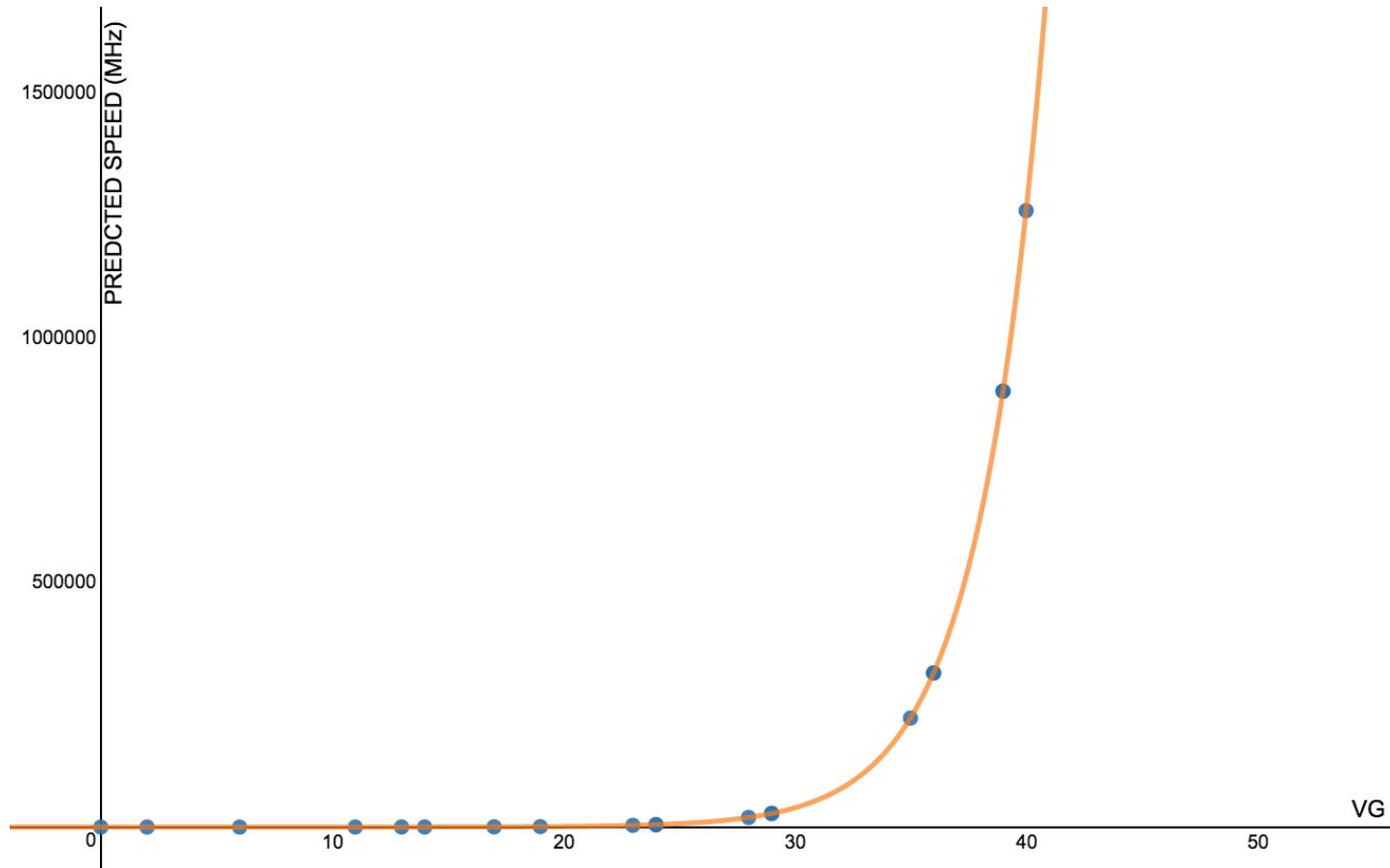
Actual Model- The equation below is the equation for the actual processor speeds, In the equation t stands for time in VG years. The 211.31 is a different starting value for the processor speed from the Atari 2600, and the 1.0579 is a lower multiplying factor.

$$\underline{A(t)} = 211.31(1.0579)^t$$
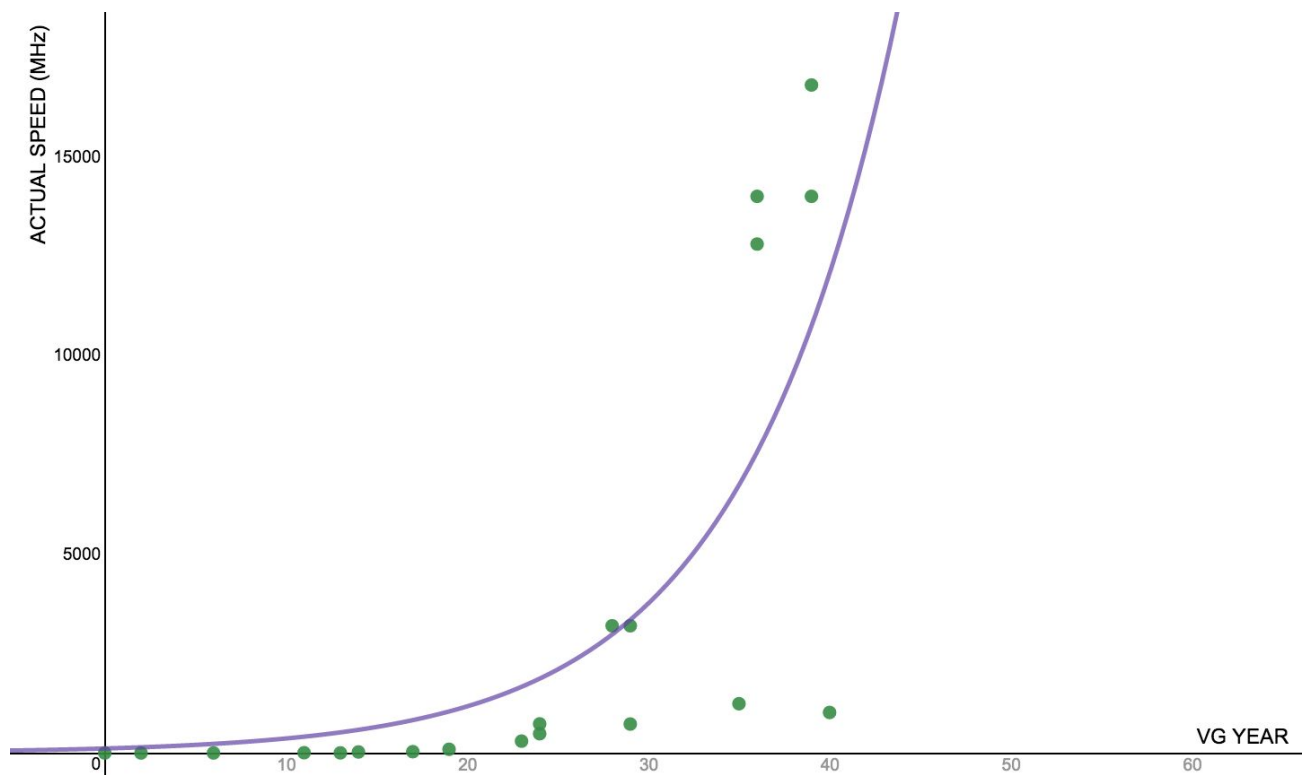
III.   Gordon Moore's law wasn't reasonable because of the big gap in between the predicted and the actual processor speeds of the game consoles.