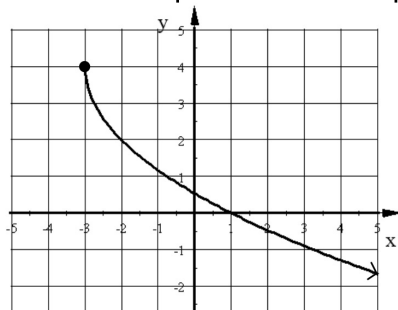1. Write the equation of this square root function.

2. The population of a city in 1992 was 15,700.
The population has been increasing 1.8% each year.

a) Find the population in 1985.

b) Find the population in 2010.

3. The half-life of a medicine is 20 minutes. You took a 300ml dose at 10:00 am.

How much remains in your system at 1:30 pm the same day. roudn to the nearest hundredth.

Solve each equation to the nearest hundredth.

4. $5(6)^{x+3} - 7 = 29$

5. $\log_5 x - \log_5(x - 4) = 3$

6. Write the equation of this periodic function.

$\left(-\frac{\pi}{30}, 4\right)$

$\left(-\frac{\pi}{3}, -2\right)$

$\left(-\frac{2\pi}{15}, -2\right)$

$\left(\frac{\pi}{15}, -2\right)$

$\left(-\frac{7\pi}{30}, -8\right)$