

Bell Work 2-1-19

$$y = a(1 \pm r)^n$$

1) A new car recently purchased has a depreciates at a rate of 22% each year. The purchase price was \$31,000. What is the value of the car after 7 years?

$$\begin{aligned}
 &31,000(1-0.22)^7 & a &= 31,000 \\
 &31,000(.78)^7 & r &= 22\% = 0.22 \\
 &31,000(0.175655689) = 5445.326 = \$5445.33 & n &= 7
 \end{aligned}$$

2) A family purchases a home for \$237,000. The home is expected to increase in value by 3.8% each year. Find the value of the home after 12 years.

$$\begin{aligned}
 &237,000(1+0.038)^{12} & a &= 237,000 \\
 &237,000(1.038)^{12} & r &= 3.8\% = 0.038 \\
 &237,000(1.564473611) = 370,780.25 & n &= 12
 \end{aligned}$$

Feb 1-6:18 AM