Log and Exponential Word Problem Answers

1. (175 + 237,54)\* (1 + .0325/4) ^ 8

2. 1.5 x (1 + n) ^ 60 = 25.25

 (1 + n)^ 60 = 25.25 / 1.5

 60 log (1 + n) = log(25.25/1.5)

 log(1+n) = log(25.25/1.5) / 60

 10^ log(1+n) = 10 ^ (log(25.25/1.5) / 60)

 n = = 10 ^ (log(25.25/1.5) / 60) – 1 (ans = .0481807239)

2. . 1.5 x (1 + n) ^ 60 = 25.25

 (1 + n)^ 60 = 25.25 / 1.5

 n = 16 root of (25.25/1.5) – 1 (ans = .0481807239)

3. 1.25 x 1.05^ n = 2

 1.05^n = 2/1.25

 n = log (2/1.25) / log(1.06) ans = 9.6331635

4. 1000 x (1 + n) ^ 8 = 40000

 (1 + n) ^ 8 = 40

 8th root (40) – 1 = .58 = 58%

5. 100000 x .87^n = 100000

 n = log(100000/1000000)/log(.87) = 16.5

6. 23500 x .80^4

 23500 x .80^n = 6000

 n = log(6000/23500) / log(.80) ans = 6.11

7. 40 x .5\* (10000/1000) = .0488