

5 – 7 Exponential Equations; Changing Bases Supplement

#1 A radioactive substance has a half-life of 1.4 years.

a) If there are 10 mg now, how much would you have in 7 years?

b) How long does it take to decay to 4 mg?

#2 Investment at 6% annual interest compounded daily – How long does it take to triple?

#3 A \$5,000 savings bond will double in 4 years.

a) Give a formula for $A(t)$.

b) How long does it take to triple?

#4 Solve $(e^3)^3 = 200$

#5 Rule of 72: When will it double? Show that $69.3/r\%$ is MORE accurate.

#6 $e^{2x} - e^x - 6 = 0$