1 In one hour, a substance decay by 20.% and so (1/2)n = 0.80. The number of half-lives that have elapsed is ...

A n = - log(0.80)/log(2) = log(8)/log(2)
B n = - log(0.80)/log(2) = (log(8)-1)/log(2)
C n = - log(0.80)/log(2) = (-log(8)+1)/log(2)
D None of the above

2 In one hour, a substance decay by 20.%. This means...

A (1/2)n = 20.
B (1/2)n = 0.20
C (1/2)n = 80.
D (1/2)n = 0.80

3 In one hour, a substance decays by 20.% and so (1/2)n = 0.80. We can solve for n using

A n = 0.80/log(1/2) = - 0.80/log(2)
B n = 0.80/log(2)
C n = - log(0.80)/log(2)
D n = log(0.80)/log(2) = log(0.80/2)

4 In one hour, a substance decay by 20.% and so (1/2)n = 0.80. The number of half-lives that have elapsed is ...

A 0.20
B 0.25
C 0.50
D 0.80
E None of these

5 A substance decays with half-life 6.0 min. The fraction of the substance present after 20. minutes is x. Which expression is correct?

A x = 20./6.0
B x = 1/6.0
C (1/2)10/3 = x
D (1/2)-10/3 = x

6 A substance decays with half-life 6.0 min. The fraction of the substance present after 20. minutes, x =(1/2)-10/3, is

A 0.20
B 0.25
C 0.80
D None of these

7 At a particular moment of time, a sample of a radioactive element contains 1,000,000 atoms. After 10 hours, 125,000 atoms of the element remain. What is the half-life of the radioactive decay?

A 10 hours
B 5 hours
C 2.5 hours
D None of the above.