

Example 1. Find C and r such that $f(t) = Ce^{rt}$ goes through the points $(0, 7.3)$ and $(2.9, 17.8)$.

Example 2. (Hughes-Hallett, 4e, 1.7#11) A cup of coffee contains 100 mg of caffeine, which leaves the body at a continuous rate of 17% per hour.

- (a) Write a formula for the amount, A mg, of caffeine in the body t hours after drinking a cup of coffee.
- (b) Find the half-life of caffeine.