F-LE Allergy medication

Task

Every day Brian takes 20 mg of a drug that helps with his allergies. His doctor tells him that each hour the amount of drug in his blood stream decreases by 15%.

a. Construct an exponential function of the form $f(t) = ab^t$, for constants a and b, that gives the quantity of the drug, in milligrams, that remains in his bloodstream t hours after he takes the medication.

b. How much of the drug remains one day after taking it?

c. Do you expect the percentage of the dose that leaves the blood stream in the first half hour to be more than or less than 15%? What percentage is it?

d. How much of the drug remains one minute after taking it?