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**Implement functions:**

getBlackCall, makeDepoCurve, getRateIntegral, makeFwdCurve, fwdSpot, getStrikeFromDelta, makeSmile, getSmileVol, makeVolSurface, getVol, getpdf, getEuropean, BinarySearch, Secant.

**Issues:**

1. getBlackCall may receive negative strike as input because when I calculate second derivative, the (x-h) in f(x-h) may be negative. Thus we k<=0, I set value as fwd.
2. when I calculate the forward price, noticed that the given spot price is not ,
3. when I use root search to find strike price, I found secant method is not stable. Instead, I change norminv() to directly solve strike price

when I do the spline interpolation, I was wondering how to calculate the first derivative of edge point, noticed that the spline expression should be

Then I get the result I want

1. when I use getpdf, noticed that when k becomes very small, the result is not very accurate. Thus, I make the ‘h’ in f(x+h) to be 1e-7, which is enough to handle most case.
2. When I consider how to integrate 0 to inf in getEuropean, I noticed that when x becomes large, pdf(x) will be zero, thus I set a upper limit for the integration, when pdf(b)<error, I will just integrate from 0 to b.
3. Happy experience about the project. Really learned a lot.