

## HOMework

Consider  $H$  as the random variable representing the height of a bottle produced by COCA-COLA in Atlanta.  $H$  is Gaussian with mean=20 cm and standard deviation=0.15 cm. If COCA-COLA produces 100,000 of bottles in 1 month, how many bottles will have an height greater than 20.5 cm ?

Use both tables and the error function in matlab. Show all the calculations.

Hint 1: You need to compute  $\Pr[H > 20.5 \text{ cm}]$ .

Hint 2: Remember from class that  $\Pr[-z < Z < z] = \text{erf}(z/\sqrt{2})$  where  $Z$  is a normal variable.

**P.S. It is in your interest doing this homework ..... I can call you at the board or ask you questions in class.**