10 The screenshot in Fig. 10 shows the probability distribution for the continuous random variable X, where $X \sim N(\mu, \sigma^2)$.
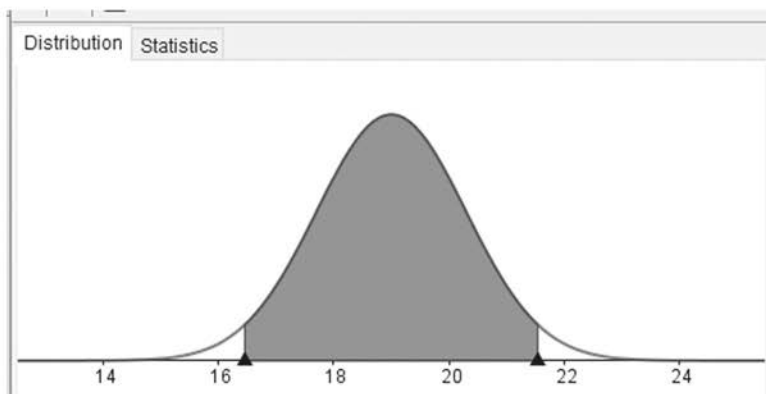

Fig. 10

The area of each of the unshaded regions under the curve is 0.025. The lower boundary of the shaded region is at 16.452 and the upper boundary of the shaded region is at 21.548.

(i) Calculate the value of μ. [1]

(ii) Calculate the value of σ^2. [3]

(iii) Y is the random variable given by $Y = 4X + 5$.

    (A) Write down the distribution of Y. [3]

    (B) Find P($Y > 90$). [1]