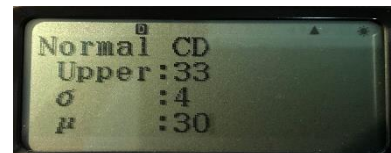
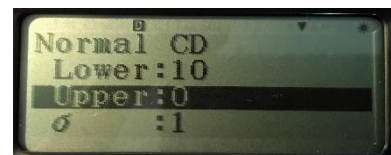
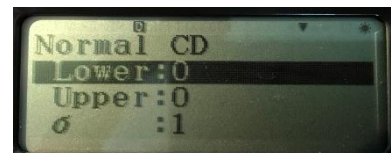
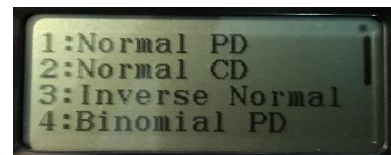
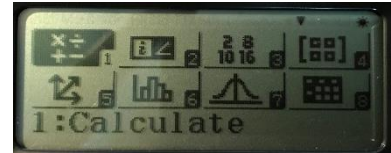


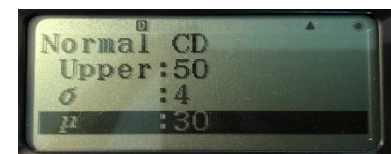
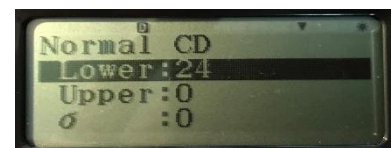
3B Finding Probabilities

1. Given that $X \sim N(30, 4^2)$, find:

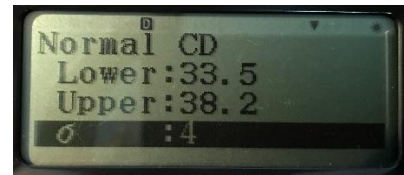
a) $P(X < 33)$



b) $P(X \geq 24)$



c) $P(33.5 < X < 38.2)$



d) $P(X < 27 \text{ or } X > 32)$



2. An IQ test is applied to a population of adults. The scores, X , on the test are found to be normally distributed with $X \sim N(100, 15^2)$. Adults scoring more than 140 on the test are classified as 'genius'.

a) Find the probability that an adult chosen at random achieves a 'genius' classification

b) Twenty adults take the test. Find the probability that two or more are classified as 'genius'