**1 a** There are two dots which represent sample means of 25 or more from the 100 samples simulated. Thus we can estimate $\Pr(\bar{X} \geq 25) = 0.02$.

b There is one dot which represents a sample mean of 23 or less from the 100 samples simulated. Thus we can estimate $\Pr(\bar{X} \leq 23) = 0.01$.

2 a There are four dots which represent sample means of 163 or more from the 100 samples simulated. Thus we can estimate $\Pr(\bar{X} \geq 163) = 0.04$

b There are five dots which represent sample means of 158 or less from the 100 samples simulated. Thus we can estimate $\Pr(\bar{X} \leq 158) = 0.05$

3 a calculator

b
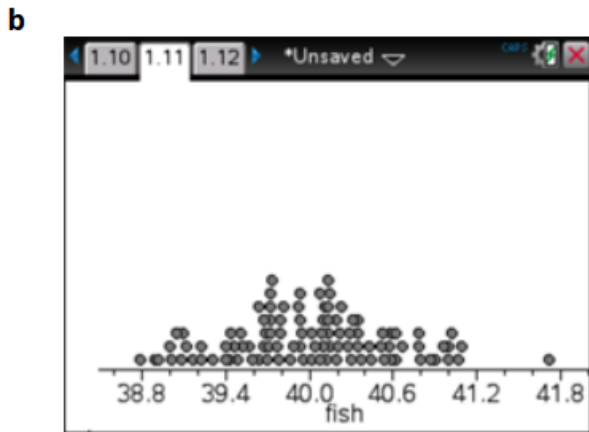
c i $\Pr(\bar{X} \geq 41) \approx 0.04$.
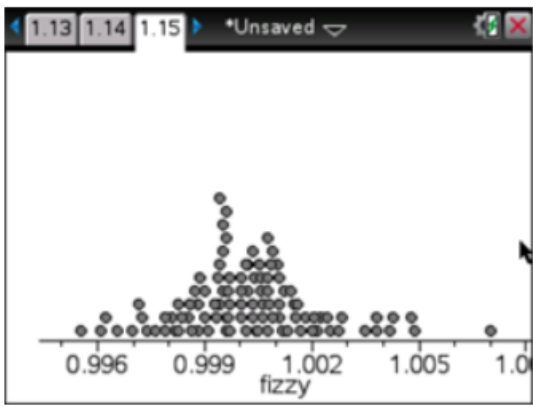
ii $\Pr(\bar{X} \leq 39) \approx 0.04$.

4 a calculator

b
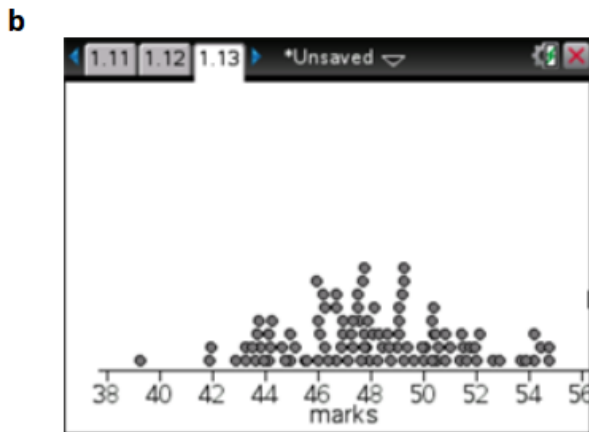
c i $\Pr(\bar{X} \geq 55) \approx 0.01$.

ii $\Pr(\bar{X} \leq 40) \approx 0.01$.

5 a calculator
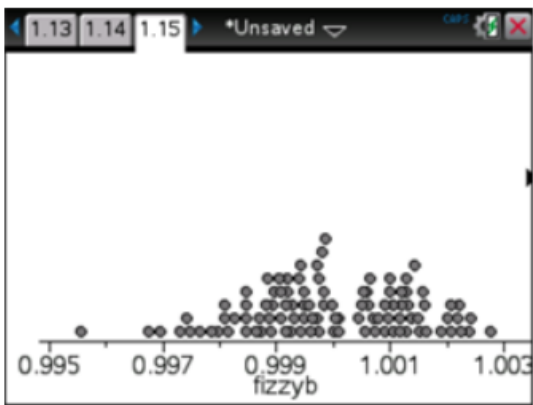
b

c i $\Pr(\bar{X} \geq 1.003) \approx 0.07$

ii $\Pr(\bar{X} \leq 0.995) \approx 0.01$

6 a calculator

b

c i $\Pr(\bar{X} \geq 1.003) \approx 0$

ii $\Pr(\bar{X} \leq 0.995) \approx 0$