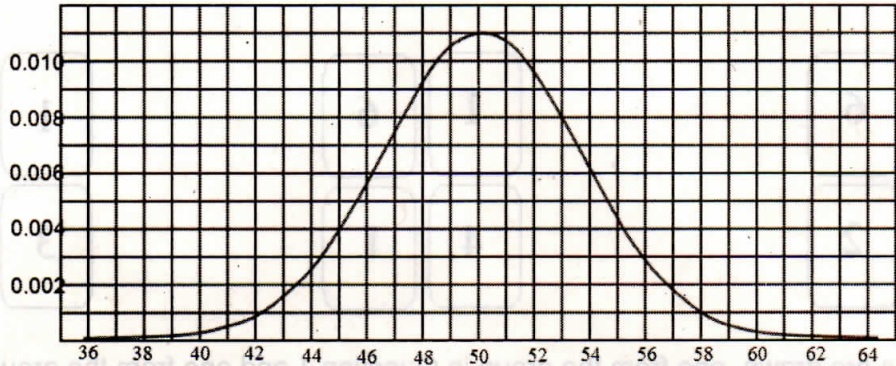


LESSON
8-7

Practice
Fitting to a Normal Distribution

1. In a plant shop, the heights of young plants are normally distributed with a mean of 50 mm and a standard deviation of 4 mm. Count grid squares in the graph to estimate the probability that a plant chosen at random by a customer will be less than 54 mm tall.



Scores on a test are normally distributed with a mean of 80 and a standard deviation of 5. Use the table below to find each probability. The first probability has been found for you.

$z = \frac{x - \mu}{\sigma}$	-2	-1	0	1	2
Area Under Standard Normal Curve	0.02	0.16	0.5	0.84	0.98

2. A randomly selected student scored below 80.

$$z = \frac{80 - 80}{5} = 0, \text{ so } P(\text{below } 80) = 0.5$$

3. A randomly selected student scored above 90. _____

4. A randomly selected student scored below 75. _____

5. A randomly selected student scored between 75 and 85. _____

6. The wait times, in minutes, of 10 customers in line at a grocery store are given below. The mean wait time is 7 minutes. How many data points fall below the mean? Use your answer to explain whether the data appear to be normally distributed.

16	15	10	7	5
5	4	3	3	2