

[statistics]

A random sample of the Data Management class marks of 70 students in Peel results in the following data:

57	66	89	92	34	61	72	81	55	50	65	45	78	90
72	62	81	30	83	69	60	77	72	64	58	48	88	72
92	87	52	75	80	61	42	76	68	54	68	63	53	77
82	50	58	62	74	83	62	61	86	72	65	68	74	60
64	61	83	79	79	57	66	68	75	46	90	51	83	67

1. Organize this raw data into a frequency distribution table (use classes 29.5-39.5, 39.5-49.5...). Draw a frequency histogram.
2. Find the mean, \bar{x} , and the standard deviation, s , of this sample.
3. For the following problems let us take the sample mean and the sample standard deviation as approximations of the population mean, σ . Also let us assume that the Data Management marks are normally distributed. Answer the following questions about the entire population of Data Management students in Peel.
 - a. What would be the predicted failure rate?
 - b. What percentage of the students would be expected to earn over 80?
 - c. What percentage of the students would be expected to earn a mark between 70 and 80?
 - d. What would be the expected range of Data Management marks for the middle third of the students?