

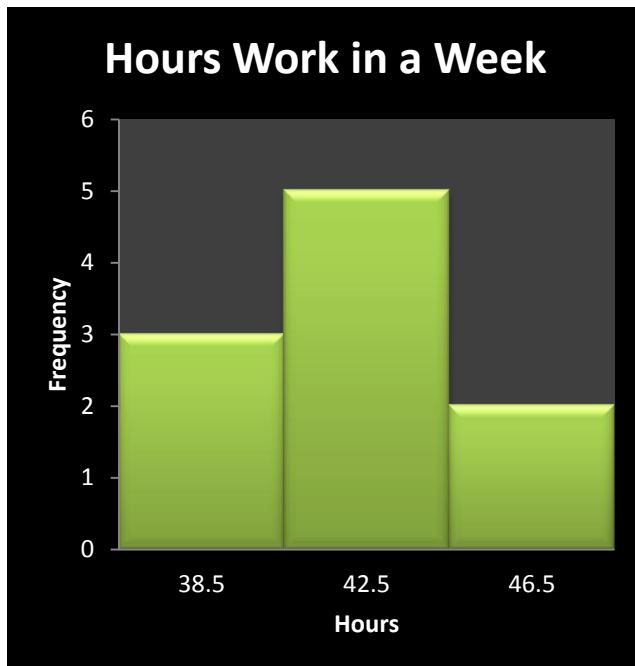
How Many Hours Do You Work in a Week?

1. Data: 41, 38, 39, 45, 47 41, 44, 41, 37, 42 (in hours)
2. Frequency Distribution Table (3 classes)

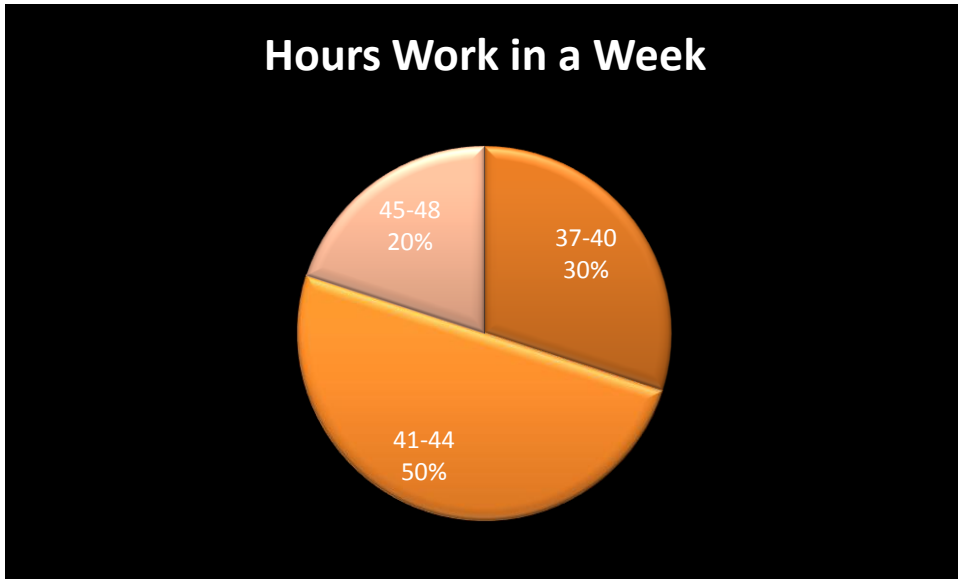
Class width: $\frac{47 - 37}{3} = 3.33 \rightarrow 4$

Class	Frequency	Midpoint	Relative Frequency	Cumulative Frequency
37-40	3	38.5	0.30	3
41-44	5	42.5	0.50	8
45-48	2	46.5	0.20	10

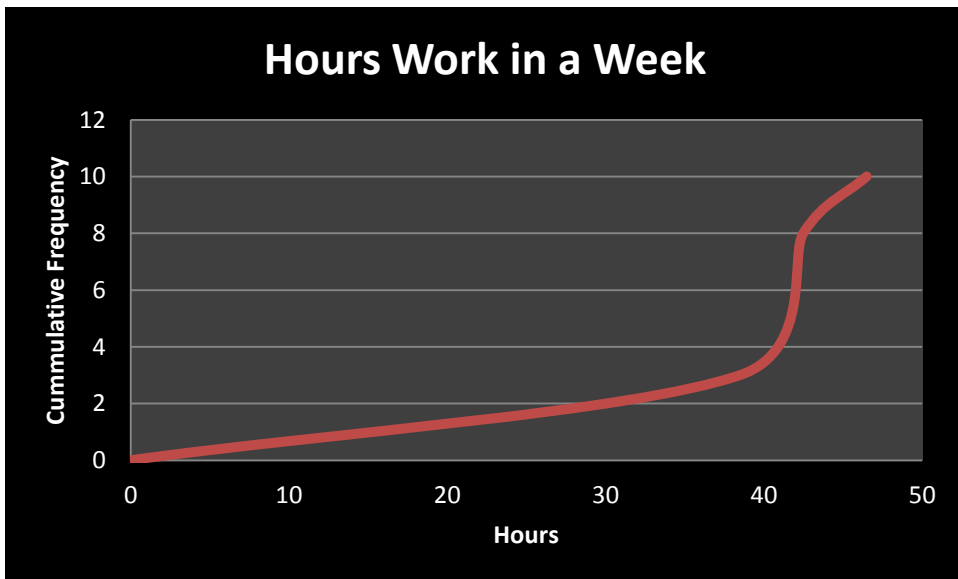
3. Histogram



4. Pie Chart



5. Ogive



6. Mean, Median and Mode

$$\text{Mean: } \frac{37 + 38 + 39 + \dots + 47}{10} = 41.5 \text{ hrs}$$

Median: 41hrs

Mode: 41hrs

7. Variance and Standard Deviation

x	$x - \mu$	$(x - \mu)^2$
41	-0.5	0.25
38	-3.5	12.25
39	-2.5	6.25
45	3.5	12.25
47	5.5	30.25
41	-0.5	0.25
44	2.5	6.25
41	-0.5	0.25
37	-4.5	20.25
42	0.5	0.25
		SSx=88.5

Variance:

$$\sigma^2 = \frac{SSx}{n} = \frac{88.5}{10} = 8.85 \text{ hrs}$$

Standard Deviation

$$\sigma = \sqrt{\frac{SSx}{n}} = \sqrt{8.85} \approx 2.97 \text{ hrs}$$

8. Five number summary and Box-and-Whisker Plot

