

# QUARTILES

## APPLICATIONS

### IT'S ALL ABOUT FASHION ...

#### Q1 – ITALIAN SHOES, SHOES, SHOES

The best leather shoes in the world come from Italy. European shoe sizes are different to American sizes. For example, an American Shoe Size 6 is equivalent to a European 38. To cater for the “average” woman’s shoe size, a survey of the shoe size data of 11 customers was conducted and the data analysed as a five-number summary.

European shoe size data -  
35, 38, 38.5, 44, 45, 48, 34, 38, 37, 38.5, 39

Calculate the:

- Lowest score
- 1<sup>st</sup> Quartile
- 2<sup>nd</sup> Quartile (Median)
- 3<sup>rd</sup> Quartile
- Highest score
- Inter-quartile Range



#### Q2 – LA GRANDE SOLDE IN FRANCE

Italy may make the best shoes, but Paris creates the world’s most chic clothes. Each year, there is La Grande Solde (The Great Sale) where garments are sold to everyday customers. A Parisian fashion house that makes ready-to-wear clothes conducts a survey of 15 customers to determine the inter-quartile range of clothing sizes to maximize their profits.

European clothing size data –  
36, 44, 32, 34, 34, 36, 38, 42, 44, 36, 36, 40, 44, 36, 34

Calculate the five-number summary, the inter-quartile range and then decide which clothing sizes would be most likely to sell.

# ANSWERS

	Lowest Score	1 <sup>st</sup> Quartile	2 <sup>nd</sup> Quartile (Median)	3 <sup>rd</sup> Quartile	Highest Score	IQR (Most likely to sell)
Q1	34	37	38.5	44	48	37 to 44
Q2	32	34	36	42	44	34 to 42