



e)  $Mean = \frac{3+3+3+4+4+4+4+4+4+5+5+5+5+5+5+5+5+6+6+6+6+6+7+7+7+8+8}{26} = 5.23$

$Mean \approx 5$

f) Range of shoe sizes:  $8 - 3 = 5$  sizes (size 3, 4, 5, 6, 7, 8)

g) No the results are not accurate, only 4% of the ladies in the area were surveyed, they could increase the sample size to at least 10% or 60 women. The results would also be more accurate if you took into account the size of specific shoes (eg: some people take their boots in a bigger size than their sandals). Or any other reasonable answer.

5. a) A 2 year old boy with a head circumference of 48,5cm is in the 50<sup>th</sup> percentile.  
 b) 53 cm circumference  
 c) You have a head circumference that is bigger than 50 % of boys your age and also smaller than 50 % of boys your age.  
 d) Median.  
 e) He is in the 3<sup>rd</sup> percentile.  
 f) Using only ten boys to draw up this chart would be an unfair test. You need to increase the sample size to at least 10 % of the population in every age category.

6. a) Median  
 b)  $\frac{160}{4} = 40$  players  
 c) Above 25,5  
 d)  $\frac{160}{4} = 40$  players OR one quarter  
 e) Range:  $54,4 - 0 = 54,4$   
 f) 48,4 is in the top quartile, so Jacques Kallis has a batting average better than at least 75% or 120 of the other players.

g) The maximum.

h)

0	0 7
1	1 1 6 9
2	3 5 8 9
3	2 7
4	0 9
5	3
6	1
7	3
9	4
10	2 8

$$\therefore 6 \mid 1 = 61 \text{ and } 5 \mid 3 = 53$$