2.3) Measures of spread

Worked example

Calculate the interquartile range:

$2, 3, 7, 9, 1, 8, 6, 3, 0, 1, 9$

Your turn

Calculate the interquartile range:

$3, 2, 5, 9, 5, 1, 7, 0, 2$

3

Worked example

Calculate the interquartile range:

$2, 3, 7, 9, 1, 8, 6, 3, 0, 1, 9, 12$

Your turn

Calculate the interquartile range:

$3, 2, 5, 9, 5, 1, 7, 0$

4.5

Worked example

Estimate the interquartile range:

Score, x	Frequency
$0 \leq x < 1$	3
$1 \leq x < 2$	2
$2 \leq x < 4$	1
$4 \leq x < 9.5$	1
$9.5 \leq x < 10$	4

Your turn

Estimate the interquartile range:

Score, x	Frequency
$0 < x \leq 1$	11
$1 < x \leq 3$	4
$3 < x \leq 6$	2
$6 < x \leq 6.5$	2
$6.5 < x \leq 10$	8

6.43 (3 sf)

Worked example

Times, x, have been rounded to the nearest minute. Estimate the interquartile range:

Time, x	Frequency
$0 - 2$	5
$3 - 5$	2
$6 - 10$	3

Your turn

Times, x, have been rounded to the nearest minute. Estimate the interquartile range:

Time, x	Frequency
$0 - 3$	7
$4 - 8$	11
$9 - 10$	2

3.22 (3 sf)

Worked example

Estimate the 20th – 80th interpercentile range:

Score, x	Frequency
$0 \leq x < 1$	3
$1 \leq x < 2$	2
$2 \leq x < 4$	1
$4 \leq x < 9.5$	1
$9.5 \leq x < 10$	4

Your turn

Estimate the 10th – 90th interpercentile range:

Score, x	Frequency
$0 < x \leq 1$	11
$1 < x \leq 3$	4
$3 < x \leq 6$	2
$6 < x \leq 6.5$	2
$6.5 < x \leq 10$	8

8.57 (3 sf)

Worked example

Times, x, have been rounded to the nearest minute. Estimate the 5^{th} – 95^{th} interpercentile range:

Time, x	Frequency
$0 - 2$	5
$3 - 5$	2
$6 - 10$	3

Your turn

Times, x, have been rounded to the nearest minute. Estimate the 15^{th} – 85^{th} interpercentile range:

Time, x	Frequency
$0 - 3$	7
$4 - 8$	11
$9 - 10$	2

6.55 (3 sf)