



## Frequency histogram and frequency polygon

**QUESTION 1** For the set of scores given:

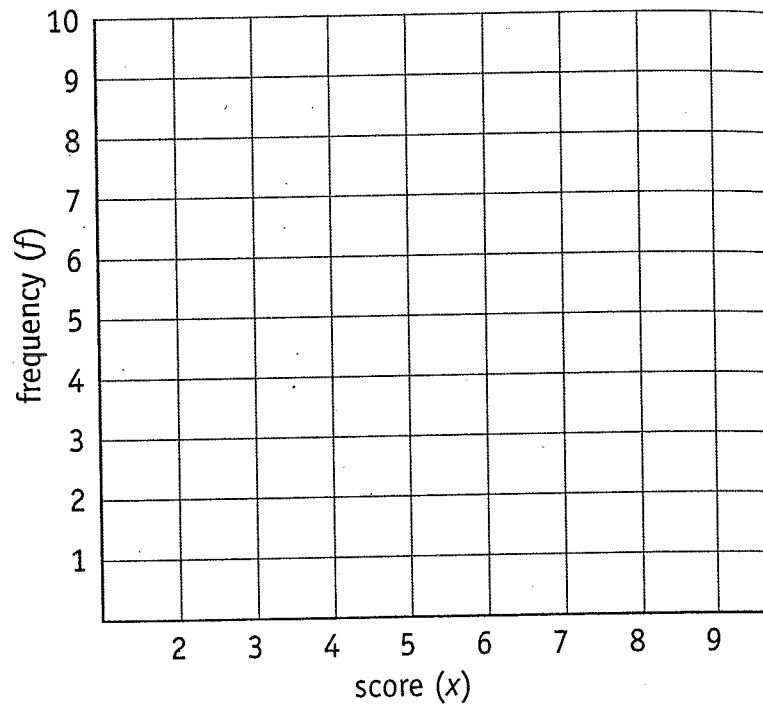
a complete the frequency distribution table

b draw a frequency histogram

c draw a frequency polygon

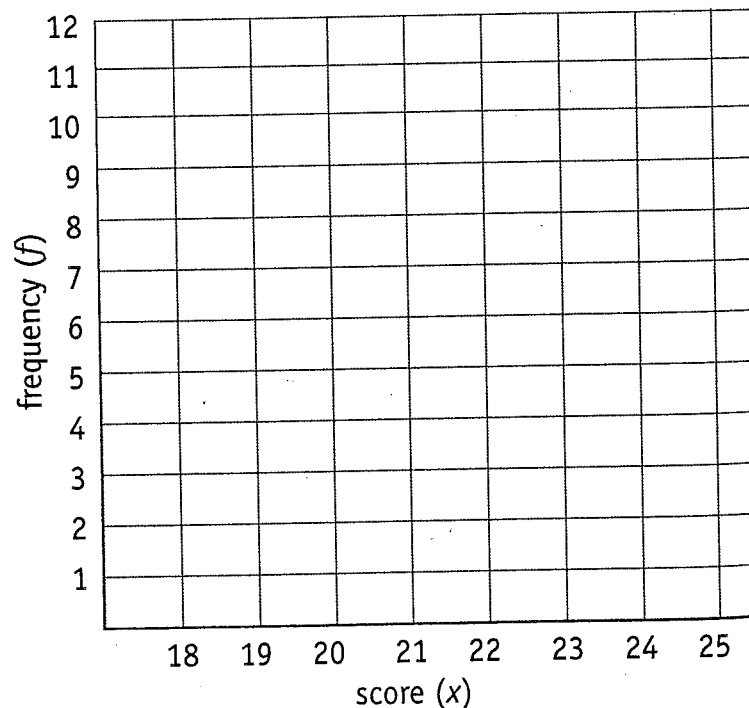
3 8 6 3 2 5 5 8 5 3 7 4 5 7 8 2 5 8 6 4 6  
9 7 7 6 7 8 9 7 5 5 7 6 8 6 7 6 7 7 6

Score (x)	Tally	Frequency (f)



**QUESTION 2** From the following distribution table, draw a frequency histogram and frequency polygon.

<b>Score</b>	18	19	20	21	22	23	24	25
<b>Frequency</b>	3	5	4	8	12	9	6	3



# Statistics and probability



## Mean

**QUESTION 1** Find the mean of the following set of scores.

a 7, 8, 9

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b 8, 9, 10, 14

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c 10, 11, 12, 13

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d 15, 17, 19, 23

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e 3, 5, 8, 10

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f 9, 10, 13, 14, 16, 22

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**QUESTION 2** Find the mean of the following set of scores.

a 3, 3, 5, 5, 5, 5, 7, 7, 7, 7

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b 8, 8, 9, 9, 9, 8, 8, 8, 8

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c 3, 3, 6, 6, 6, 7, 7, 7, 7

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d 3, 3, 3, 3, 3, 4, 4, 5, 5, 6

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e 4, 5, 6, 7, 6, 5, 4, 3

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f 8, 7, 9, 6, 5, 6, 8, 7

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**QUESTION 3** Find the mean of the following set of scores.

a 3, 3, 3, 6, 6, 8, 8, 8, 8

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b 2, 2, 4, 4, 4, 5, 6, 8

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c 6, 6, 6, 8, 8, 8, 8, 8, 9, 9, 9, 9

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d 5, 5, 5, 6, 6, 6, 7, 7, 7, 7, 8, 8, 8

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**QUESTION 4** Complete each table and calculate the mean.

a

x	f	fx
2	1	
3	2	
4	2	
5	3	
6	2	
7	2	

b

x	f	fx
1	2	
2	2	
3	2	
4	1	
5	3	
6	3	

c

x	f	fx
4	3	
5	1	
6	2	
7	1	
8	1	
9	1	

## Mode

**QUESTION 1** What is the mode of the following sets of scores?

a 2, 2, 3, 8, 9, 3, 2, 5, 2, 3

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b 6, 7, 5, 6, 8, 6, 3, 4, 6, 5, 6

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c 2, 3, 4, 3, 3, 2, 2, 3, 3, 3, 1

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d 5, 3, 4, 3, 5, 5, 6, 5, 7, 5

---

e 6, 7, 8, 9, 9, 9, 10, 5, 9, 6

---

f 2, 5, 3, 5, 3, 5, 2, 1, 5, 5, 5, 6

---

g 2, 3, 5, 2, 1, 2, 3, 2

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h 5, 2, 4, 4, 4, 5, 4, 4, 6, 3

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**QUESTION 2** Find the mode from each set of scores.

a 6, 5, 7, 5, 8, 6, 5, 7, 5

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b 6, 5, 6, 7, 4, 3, 6, 6, 2, 6

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c 5, 6, 4, 7, 7, 5, 7, 7, 5, 4, 7, 7, 8

---

d 5, 6, 8, 6, 5, 6, 5, 6, 6, 6, 7, 6, 6

---

e 16, 15, 16, 19, 16, 17, 16, 16

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f 7, 8, 7, 6, 7, 5, 7, 7, 5, 7, 7

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g 42, 37, 38, 42, 43, 42, 42, 44, 42

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h 6, 1, 2, 6, 4, 6, 4, 6, 3, 2, 6, 6, 1, 6

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**QUESTION 3** Select the mode from each set of scores.

a 5, 6, 6, 5, 7, 5, 8, 5, 5, 7

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b 3, 4, 5, 5, 3, 3, 3, 4, 3, 7

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c 2, 3, 4, 3, 2, 1, 3, 3, 4, 3

---

d 4, 3, 6, 6, 3, 6, 5, 6, 7, 6, 6

---

e 2, 3, 4, 4, 5, 4, 5, 4, 6, 5, 4, 4, 4, 3, 4

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f 7, 8, 9, 7, 10, 7, 8, 7, 9, 7, 9, 7, 5, 7

---

**QUESTION 4** Find the mode for each set of scores.

a 7, 8, 7, 7, 9, 7, 8, 7, 7, 7

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b 6, 7, 8, 7, 6, 5, 6, 6, 7, 6

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c 9, 8, 11, 11, 8, 11, 10, 11, 12, 11, 11

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d 5, 6, 7, 7, 8, 7, 8, 7, 9, 8, 7, 7, 7, 6, 7

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e 10, 11, 12, 10, 13, 10, 11, 10, 11, 10, 12, 10, 8, 10

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f 8, 9, 8, 8, 10, 8, 9, 8, 8, 8

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## Median

**QUESTION 1** Find the median of the following sets of scores.

a 8, 9, 10, 12, 10

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b 11, 14, 18, 13, 11

\_\_\_\_\_

c 5, 8, 9, 8, 9, 10, 9

\_\_\_\_\_

d 12, 16, 18, 14, 13

\_\_\_\_\_

e 6, 4, 7, 5, 8

\_\_\_\_\_

f 21, 23, 20, 18, 18

\_\_\_\_\_

**QUESTION 2** What is the median of each set of scores?

a 4, 5, 6, 8, 6

\_\_\_\_\_

b 13, 16, 20, 15, 13, 14, 13

\_\_\_\_\_

c 3, 6, 7, 6, 7, 8, 7

\_\_\_\_\_

d 9, 13, 15, 11, 10

\_\_\_\_\_

e 8, 6, 9, 7, 10

\_\_\_\_\_

f 16, 18, 15, 13, 13

\_\_\_\_\_

**QUESTION 3** Find the median of the following sets of scores.

a 8, 9, 10, 11, 12

\_\_\_\_\_

b 42, 52, 32, 22, 52, 72, 62

\_\_\_\_\_

c 13, 15, 8, 12, 9, 14, 10, 11, 15

\_\_\_\_\_

d 7, 10, 5, 2, 1, 2, 7, 6, 4, 3, 10

\_\_\_\_\_

e 9, 1, 6, 3, 2, 5, 7, 8, 4, 7, 9

\_\_\_\_\_

f 2, 7, 1, 5, 8, 5, 3, 6, 7, 8, 8

\_\_\_\_\_

**QUESTION 4** Find the median of the following sets of scores.

a 30, 33, 25, 26, 29, 30, 33

\_\_\_\_\_

b 8, 7, 6, 8, 5, 13, 9, 9, 3

\_\_\_\_\_

c 5, 8, 13, 10, 9, 10, 13, 8, 5, 4, 5

\_\_\_\_\_

d 5, 11, 4, 8, 11, 8, 6, 9, 10, 11, 11

\_\_\_\_\_

e 5, 9, 11, 7, 6, 7, 6, 5, 9

\_\_\_\_\_

f 14, 10, 16, 13, 11, 12, 11

\_\_\_\_\_

g 3, 6, 4, 9, 22, 3, 6

\_\_\_\_\_

h 8, 12, 15, 13, 12

\_\_\_\_\_

i 5, 7, 9, 10, 11, 2

\_\_\_\_\_

j 7, 6, 5, 7, 4, 12, 10, 10, 4

\_\_\_\_\_

## Range

**QUESTION 1** Find the range of the following sets of scores.

a 8, 2, 1, 4, 5, 7, 0

\_\_\_\_\_

c 5, 3, 4, 2, 8, 13

\_\_\_\_\_

e 6, 8, 8, 5, 10, 12, 14

\_\_\_\_\_

g 10, 7, 12, 22, 1, 23

\_\_\_\_\_

b 3, 8, 11, 5, 9, 1, 3, 8, 15

\_\_\_\_\_

d 14, 11, 7, 6, 13, 11, 12

\_\_\_\_\_

f 7, 4, 5, 12, 17, 4, 3

\_\_\_\_\_

h 19, 21, 27, 19, 17, 3

\_\_\_\_\_

**QUESTION 2** Find the range of each set of scores.

a 3, 5, 2, 1, 7, 20, 3, 6

\_\_\_\_\_

c 6, 11, 9, 14, 69, 10, 11, 12

\_\_\_\_\_

e 7, 10, 5, 3, 14, 13, 18, 21

\_\_\_\_\_

g 8, 10, 22, 38, 65, 1

\_\_\_\_\_

b 0, 1, 2, 3, 5, 8, 18, 1, 0, 9

\_\_\_\_\_

d 6, 13, 17, 31, 12, 39

\_\_\_\_\_

f 10, 12, 14, 17, 18, 24, 9

\_\_\_\_\_

h 5, 10, 15, 20, 30, 35, 40

\_\_\_\_\_

**QUESTION 3** Find the range of the following sets of scores.

a 6, 8, 9, 3, 5, 1, 17

\_\_\_\_\_

c 1, 7, 8, 3, 16, 7, 8, 33

\_\_\_\_\_

e 52, 39, 52, 16, 16, 50

\_\_\_\_\_

b 1, 5, 0, 3, 8, 12, 31, 54

\_\_\_\_\_

d 4, 5, 3, 1, 9, 15, 28, 34

\_\_\_\_\_

f 6, 20, 28, 27, 34, 32, 34

\_\_\_\_\_

**QUESTION 4** Find the range of each set of scores.

a 9, 14, 12, 34, 28

\_\_\_\_\_

c 2, 5, 1, 8, 36, 72, 18

\_\_\_\_\_

e 15, 3, 8, 5, 7, 3, 2, 25, 39

\_\_\_\_\_

b 5, 9, 10, 3, 15, 29, 61

\_\_\_\_\_

d 10, 12, 14, 17, 24, 9, 15, 16, 18

\_\_\_\_\_

f 6, 4, 11, 20, 11, 67, 34

\_\_\_\_\_

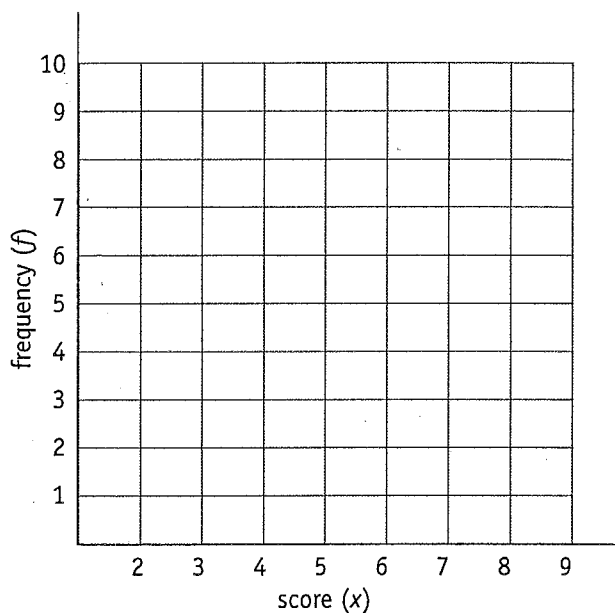
## Miscellaneous questions

**QUESTION 1** The following survey involves the test results obtained by a class of 30 students.

4 8 6 4 5 6 6 5 6 7 5 5 5 7 8  
9 5 6 7 5 4 3 2 5 6 8 7 8 6 8

- a Draw a frequency distribution table.
- b Draw a frequency histogram.
- c Draw a frequency polygon.
- d Calculate the mean.
- e Find the mode.
- f Find the median.
- g Find the range.

Score ( $x$ )	Tally	Frequency ( $f$ )



**QUESTION 2** Twenty-five families were surveyed as to how many children were in the family. The following data was obtained.

6 4 2 3 1 4 0 2 3 2 1 2 3  
2 2 1 4 3 2 0 2 5 4 5 1

- a Draw a frequency distribution table.
- b Draw a frequency histogram.
- c Draw a frequency polygon.
- d Calculate the mean.
- e Find the mode.
- f Find the median.
- g Find the range.

Score ( $x$ )	Tally	Frequency ( $f$ )

