

Non-calculator Questions

Edexcel

1.

Jack is keeping a record of the number of steps he takes each day.

Monday	8 565 steps
Tuesday	14 707 steps
Wednesday	15 323 steps
Thursday	9 788 steps
Friday	12 482 steps

(a) Work out the range of the number of steps.

(2)

steps



(b) Show a check of your answer.

(1)

Level 1 Mean and Range Exam Questions

2.

Zane needs to travel from Sheffield to London on Saturday.

The table shows the cost for the different types of transport.

type of transport	cost (£)
train first class	47.25
train standard class	34.00
bus	6.30
car	26.52

Calculate the range of these costs.

(2)

£

Level 1 Mean and Range Exam Questions

3.

Here are 4 numbers.

29.4 50.8 24.7 19.9

Work out the mean of these numbers.

(3)

Level 1 Mean and Range Exam Questions

City & guilds

4.

155	125	145	95	150	155
125	99	100	178	95	180

What is the range of these numbers?

(1 mark)

5.

What is the range of these weights?

40 kg 65kg 27kg 84kg 34kg

 kg

(1 mark)

Level 1 Mean and Range Exam Questions

6.

A shop owner sells a new board game on a website.

He wants to give an average (mean) customer rating for his website.

He asks customers to give a star rating for the board game.

Star Ratings – 8 customers							
3	4.5	3.5	3	5	0.5	4	4.5

What rating will he use for the website?

Show your working

(2 marks)

Highfield

7.

Billy and Diana enter a race.

Diana wins the race and Billy comes last.

Diana completes the race in 46 seconds; Billy takes 2 minutes 35 seconds.

What is the range of the times?

Show your working out and write the answer in the box below.

(2 marks)

Answer: _____

Level 1 Mean and Range Exam Questions

AQA

8.

Here are five numbers

4 5 9 16 16

Work out the range.

[1 mark]

Answer _____

9.

Work out the range of these numbers.

2 4 4 5 6 9

[1 mark]

Answer _____

Calculator Questions

Edexcel

1.

Ben records the time it took each person to complete a different event.

He is completing a table with information.

	Time (minutes)
Mean	39
Range	26
Longest time	53
Shortest time	

Complete the table.

(2)

2.

The table shows the price of a cup of tea in 5 different cafes.

cafe	A	B	C	D	E
price	£1.80	£1.59	£1.65	£1.45	£1.70

Calculate the mean price of a cup of tea.

(3)

£

Level 1 Mean and Range Exam Questions

3.

Sarah has a snack at work each day.

She has this information about the snacks she had last week.

day	Mon	Tue	Wed	Thu	Fri
snack	banana	chocolate	biscuit	cake	crisps
number of calories	105	260	49	257	234

Sarah thinks the mean number of calories in these snacks is more than 200

Is she correct?
Show why you think this.

(3)

Level 1 Mean and Range Exam Questions

4.

Scott is a journalist.

He is writing an article about fish and chip shops in his town.

The table shows the prices of a standard portion of fish and chips in 5 local shops.

shop	A	B	C	D	E
cost (£)	7.60	6.25	5.85	6.65	8.00

Scott thinks the mean price of a standard portion of fish and chips in these 5 shops is £6.85

- (a) Is Scott correct?
Show why you think this.

(3)



- (b) Use estimation to show a check of your answer.

(1)

Level 1 Mean and Range Exam Questions

5.

Here are five numbers.

10754 9241 4249 7012 13958

(a) Calculate the range of these numbers.

(2)



(b) Use estimation to show a check of your answer.

(1)

NCFE

6.

John looks at the bills from all the customers.

The range of amounts spent is £22.46

The largest bill was £24.56

What was the smallest bill?

[2 marks]

--

Your answer:

£

7.

Hamid looks at the times on the leader board for that day.

The times are in seconds.

Leader board	
1st	26.52
2nd	27.5
3rd	28.9
4th	29.82
5th	30.18
6th	31.2
7th	31.4

Calculate the mean time.

[2 marks]

Your answer:

seconds

8.

Sadie wants to keep hens in her garden.

She finds this information about some different types of hens.

Type of hen	Numbers of eggs per year
Buff Orpington	280
Rhode Island Red	260
Leghorn	270
Plymouth Rock	120
Speckled Sussex	250

Calculate the range in the numbers of eggs per year.

[1 mark]

Your answer:

9.

Sadie buys 10 hens.

She reads that, if the mean number of eggs per hen per year is 250 or more, then the hens are happy and healthy.

Sadie records how many eggs her 10 hens lay in the first 6 weeks.

The table shows her results:

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
46	48	55	43	52	53

Using these figures, Sadie thinks that her hens are happy and healthy.

Is Sadie correct?

Show how you decide.

[4 marks]

Your answer:

10.a)

A community group raises money to help people who sleep rough.

Volunteers pack shopping bags at a local supermarket and ask shoppers for donations.

The table shows the numbers of volunteers who packed bags on 32 Saturdays in 1 year.

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

Use the data to complete this frequency table.

[2 marks]

Number of volunteers	Frequency
0	1
1	4
2	
3	
4	
5	7
6	1
Total	32

b)

Over these days the volunteers collected £6224

What was the mean amount of money collected each Saturday?

[2 marks]

--

Your answer:

£

c)

The amounts of money collected each Saturday had a range of £53

The most money collected in a day was £220

What was the least amount of money collected in a day?

[1 mark]

--

Your answer:

£

d)

The table shows the amount of money in each of the charity boxes when the café manager counts all the donations.

The table is incomplete.

The range of the amounts is £3.59

The total is £35.36

The Save the Wado charity box has the most money in it.

Open Line charity box has the least.

Complete the table by filling in the values for Open Line and The Abbey Trust.

[2 marks]

Your answer:

Charity	Money
Save the Wado	£10.50
Think Pink	£8.72
Open Line	
The Abbey Trust	

11.

The table shows a 7-day forecast:

Day	Forecast temperatures in °C for Paris
Mon	15
Tue	17
Wed	17
Thu	16
Fri	16
Sat	22
Sun	23

Calculate the mean temperature.

[2 marks]

Blank area for working out the mean temperature.

Your answer:

°C

12.

Some scientists think that climate change might increase the number of earthquakes.

Amena finds this information about the magnitude of some earthquakes.

Magnitude of earthquakes	Location
8.0	Peru
8.2	Fiji
7.8	Ecuador
8.3	Russia
9.1	Japan

Calculate the range of the magnitudes.

[1 mark]

Your answer:

City & Guilds

13.

A doctors' receptionist wants to display a notice to show patients how long, on average, they will wait to see a doctor.

The receptionist recorded how long past their appointment time patients at the surgery waited to see their doctor yesterday morning.

Minutes waiting (to the nearest minute)		
4	8	6
4	5	3
10	7	5
9	7	4

Complete the notice.

Show all your working.

Hilltop Surgery

Average waiting time

You should expect to wait minutes to see a doctor today.

Explain why using the waiting times for yesterday morning might not give a suitable waiting time to put on the notice.

Explanation

(3 marks)

14.

15	24	16	18	21
----	----	----	----	----

What is the mean of these numbers?

(1 mark)

15.

A sea diver makes 7 different dives.

He measures how deep he dives.

This table shows his results:

Dive Number	Depth
1	-14m
2	-21m
3	-7m
4	-25m
5	-19m
6	-32m
7	-18m

What was the variation in depth for the seven dives?

Show your working

Variation metres

(1 mark)

16.

A football manager needs to pick his team for the next match.

He gets some information on players in the team from previous matches.

He needs to choose between two players based on their work rate.

He measures their work rate using **average** and **variation** of the distance they covered.

	Distance covered for previous matches (km)						
Player A	7.2	6.8	7.6	8.7	7.4	6.8	8.0
Player B	7.9	7.3	5.8	7.6	*DNP	*DNP	6.9

***DNP = Did Not Play**

Which player should the manager choose?

Make two comments with reference to average distance and variation in distances.

Space for working

Which player should the manager choose?

(tick one box)

Player A

Player B

Comment about average

Comment about variation

(6 marks)

Level 1 Mean and Range Exam Questions

Highfield

17.

These are the temperatures for the last 7 days at your holiday hotel:

Date	1st May	2nd May	3rd May	4th May	5th May	6th May	7th May
Maximum temperature	25°	28°	26°	29°	32°	35°	31°

Calculate the mean maximum temperature for the last 7 days.

Show your working and write your answer in the box below.

(2 marks)

Answer: _____

Level 1 Mean and Range Exam Questions

18.

You are moving some swords into a new display.

Below are the weights of the swords, in kg.

1.3	2.1	1.7	2.4
0.9	1.3	1.5	1.9
1.1	1.3	2.1	2.2

What is the mean and the range of the weights of the swords?

Show your working out and write the answers in the box below.

(4 marks)

<p>Mean: _____ Range: _____</p>

Level 1 Mean and Range Exam Questions

19.

A stall has a prize for the person who can correctly guess the weight of a pig to the nearest kg.

These are the names of the people with their guess in kg.

Jan 208	Pete 618	Kevin 309	Balil 863	Juniper 267
Adele 653	Simon 455	Jess 329	Manjit 487	Oliver 732
Lee 375	Arthur 428	Cameron 165	Harry 296	Theresa 340

The correct weight of the pig is **20 kg more** than the **mean** of all the guesses.

Who won the prize?

Show your working out and write the answer in the box below

(3 marks)

<p>Answer: _____</p>

Level 1 Mean and Range Exam Questions

20.a)

Calculate the mean of this set of data.

14.5 18 22.5 20 13.8 8.7

Show your working out and write the answer in the box below.

(2 marks)

Answer: _____

b)

Show how you could check your answer to question a using a reverse calculation.

Show your working out and write the answer in the box below.

(1 mark)

Open Awards

21.

- a) Davinder wants to know what her best-selling item of jewellery is and which jewellery item sold the most consistently over the 6-month period from July to December.

She has this information:

Jewellery item	Mean of items sold per month	Range of items sold per month
Bracelets		
Necklaces	47	84
Rings	35	62
Earrings	39	71

The table below shows the sales of bracelets over the 6-month period:

Months	Jul	Aug	Sept	Oct	Nov	Dec
Number of Bracelets Sold	23	22	38	28	44	97

Which is the best-selling jewellery item over the 6-month period? (2 marks)

Show your calculations and/or workings out here:

Write your answer in this box.

- b) Which jewellery item sold the most consistently over the 6-month period?
(2 marks)

Show your calculations and/or workings out here:

Write your answer in this box.

AQA

22.

Jo and Steve are planning a holiday to Spain during October.

Jo and Steve look at information about two towns they might go to.

The tables show the number of hours of sunlight in October for five years.

Town A

2014	2015	2016	2017	2018
199	219	198	195	214

Town B

2014	2015	2016	2017	2018
197	207	204	196	203

Jo says,

“We want to go to the town with the higher **average** number of hours of sunlight.”

Use the information in the tables to give one reason why they might choose Town A.

[3 marks]

23.

Here are seven numbers.

4 12 10 13 4 6 14

Work out the mean.

[3 marks]

Answer _____

24.

The climbing centre organises a competition for climbers.

Each climber has **six** attempts at climbing a 15-metre wall.

To qualify for the final a climber must have a mean time of **less than 8** seconds.

Here are Oliver's times, in seconds, for his six attempts.

9.22 8.58 7.79 7.23 8.66 8.14

Does Oliver qualify for the final?

You **must** show your working.

[4 marks]

25.

Here are five numbers.

37 58 19 12 58

Work out the range.

[2 marks]

Answer _____

