GCSE STATISTICS: TERM 10.1 MIXED TOPIC TASKS

Week 1.1

Is this an example of primary or secondary data? Reading the temperatures in the local newspaper every afternoon	Is this an example of primary or secondary data? Measuring the heights of all 24 class members	Is this an example of primary or secondary data? Counting the number of adverts in each add break on the TV
Is this an example of qualitative discrete or continuous data? The time taken for Mrs Hodgetts to run the teacher race at sports day	Is this an example of qualitative discrete or continuous data? The temperature in Lapland on 25th December	Is this an example of qualitative discrete or continuous data? The number of happy face buttons pressed on the self-service checkout
Is this an example of categorical, ranked or bivariate data? The position each student came in the cross-country race	Is this an example of categorical, ranked or bivariate data? The blood pressure of a patient before and after taking their medication	Is this an example of categorical, ranked or bivariate data? The colour of a prize ball won from a machine

Score ___ / 9

GCSE STATISTICS: TERM 10.1 MIXED TOPIC TASKS

Week 1.2

Is this an example of qualitative discrete or continuous data? The colour of a prize ball won from a machine	Is this an example of qualitative discrete or continuous data? The blood pressure of a patient before and after taking their medication	Is this an example of qualitative discrete or continuous data? The position each student came in the cross-country race
Is this an example of categorical, ranked or bivariate data? The age and time in captivity of animals at a zoo	Is this an example of categorical, ranked or bivariate data? The top speed and engine size of 2nd hand cars	Is this an example of categorical, ranked or bivariate data? The age of teachers at a school
Is this an example of a hypothesis? The older the bear, the darker its fur	Is this an example of a hypothesis? I think the average weight of a watermelon is 1.2kg	Is this an example of a hypothesis? What is the average length of a text message?

Score ___ / 9

GCSE STATISTICS: TERM 10.1 MIXED TOPIC TASKS

Week 2.1

Is this an example of categorical, ranked or bivariate data? The height of caravans at a caravan park	Is this an example of categorical, ranked or bivariate data? The grade (A*-G) the A Level Statistics students got in the 2019 A-Level exams	Is this an example of categorical, ranked or bivariate data? The time taken to complete a lap of the park and the age of the participant
Is this an example of a hypothesis? What is the maximum weight of baby born n the UK?	Is this an example of a hypothesis? The average wage for a30year old in the UK is £25,000	Is this an example of a hypothesis? I think the most people that can fit in a mini is 12
Identify the population for an investigation into the most popular subject taught to year 7 students at Aldersley High School	Identify the population for the average number of gummy bears in a 100g bag of at coop	Identify the population for the average number of blades of grass in a UK garden

Score ___ / 9

GCSE STATISTICS: TERM 10.1 MIXED TOPIC TASKS

Week 2.2

Is this an example of a hypothesis? I think the average price of a second-hand car is £2000	Is this an example of a hypothesis? What is the relationship between the GCSE Maths and GCSE Statistics grades of year 11 students?	Is this an example of a hypothesis? The most popular ride at Alton Towers is The Smiler
Identify the population for an investigation into the average age of first-time moms in Wolverhampton	Identify the population for the average height of a year 10 student in the West Midlands	Identify the population for the average weight of an Easter Egg bought by Emily.
Which of these is an advantage of taking a census rather than a sample? Unbiased Expensive	Which of these is an advantage of taking a census rather than a sample? More Accurate A lot of data to analyse	Which of these is an advantage of taking a census rather than a sample? Time-Consuming Takes everyone into account

Score ___ / 9

GCSE STATISTICS: TERM 10.1 MIXED TOPIC TASKS

Week 3.1

Identify the population for an investigation into the number of hours of sunshine per day in 2021	Identify the population for the average weight of a students school bag in year 11	Identify the population for the thickness of wool of sheep in Wales
Which of these is an advantage of taking a census rather than a sample? Hard to make sure everyone takes part Takes everyone into account	Which of these is an advantage of taking a census rather than a sample? Time-Consuming Unbiased	Which of these is an advantage of taking a census rather than a sample? More Accurate Expensive
Give an example of a sample frame that can be used to identify all of the students in a school	Give an example of a sample frame that can be used to identify all of the employees at a factory	Give an example of a sample frame that can be used to identify all of the adults in the City of Wolverhampton

Score ___ / 9

GCSE STATISTICS: TERM 10.1 MIXED TOPIC TASKS

Week 3.2

Which of these is an advantage of taking a census rather than a sample? A lot of data to analyse Takes everyone into account	Which of these is an advantage of taking a census rather than a sample? Hard to make sure everyone takes part Unbiased	Which of these is an advantage of taking a census rather than a sample? More Accurate Time-Consuming
Give an example of a sample frame that can be used to identify all of the mothers who gave birth in August 2022 at New Cross Hospital	Give an example of a sample frame that can be used to identify all of the 3rd year students at Reading University	Give an example of a sample frame that can be used to identify all of the animals at Dudley zoo
Number these random sample steps 1-4 Ignore repeats and numbers > 23 Number all of the elephants from 1-23 Choose the corresponding elephants Choose 8 random numbers using a RNG	Number these random sample steps 1-4 Choose the corresponding test papers Number all of the test papers from 1-184 Choose 30 random numbers using a RNG Ignore repeats and numbers > 184	Number these random sample steps 1-4 Choose 20 random numbers using a RNG Number all of the test papers from 1-55 Choose the corresponding cars Ignore repeats and numbers > 55

Score ___ / 9

GCSE STATISTICS: TERM 10.1 MIXED TOPIC TASKS

Week 4.1

Give an example of a sample frame that can be used to identify all of the bags made at a factory	Give an example of a sample frame that can be used to identify all of the students at Windsor High School	Give an example of a sample frame that can be used to identify all of the employees at Heath Park Services
Number these random sample steps 1-4 Ignore repeats and numbers > 37 Choose the corresponding students Number all of the students from 1-37 Choose 10 random numbers using a RNG	Number these random sample steps 1-4 Choose the corresponding pigeons Choose 50 random numbers using a RNG Number all of the pigeons from 1-250 Ignore repeats and numbers > 250	Number these random sample steps 1-4 Choose 20 random numbers using a RNG Choose the corresponding TV shows Number all of the TV shows from 1-156 Ignore repeats and numbers > 156
Calculate the number required for each strata for a sample size of 30 0-9: 18 10-19: 44 20-29: 51 30-39: 7	Calculate the number required for each strata for a sample size of 100 red: 82 yellow: 147 blue: 23 green: 90	Calculate the number required for each strata for a sample size of 10 manager: 3 supervisor: 8 s.assistant: 42 c.services: 21

Score ___ / 9

GCSE STATISTICS: TERM 10.1 MIXED TOPIC TASKS

Week 4.2

Number these random sample steps 1-4

Choose the corresponding hats
Number all of the hats from 1-341
Choose 100 random numbers using a RNG
Ignore repeats and numbers > 341

Number these random sample steps 1-4

Ignore repeats and numbers > 82
Choose the corresponding cameras
Choose 20 random numbers using a RNG
Number all of the pigeons from 1-82

Number these random sample steps 1-4

Choose the corresponding hooks
Choose 15 random numbers using a RNG
Number all of the hooks from 1-38
Ignore repeats and numbers > 38

Calculate the number required for each strata for a sample size of 25

0	1	2	3
26	5	10	38

Calculate the number required for each strata for a sample size of 80

rose	tulip	daisy	iris
56	74	194	23

Calculate the number required for each strata for a sample size of 15

0-4	5-10	11-14	15-29
8	2	31	16

Calculate the regular interval for a systematic sample of size 40 from a population of 228

Calculate the regular interval for a systematic sample of size 25 from a population of 96

Calculate the regular interval for a systematic sample of size 12 from a population of 50

Score ___ / 9

GCSE STATISTICS: TERM 10.1 MIXED TOPIC TASKS

Week 5.1

Calculate the number required for each strata for a sample size of 12

infant	junior	senior	6th form
18	22	32	8

Calculate the number required for each strata for a sample size of 100

0-2	2-4	4-6	6-8
84	15	63	92

Calculate the number required for each strata for a sample size of 30

S.Cowell	A.Dixon	D.Walliams	A&D
53	7	45	122

Calculate the regular interval for a systematic sample of size 30 from a population of 142

Calculate the regular interval for a systematic sample of size 100 from a population of 2231

Calculate the regular interval for a systematic sample of size 8 from a population of 49

What type of sampling method is this?

Marcia asks parents at the school gate if they are interested in taking up piano lessons for their children

What type of sampling method is this?

Harnesh groups the animals into 'zones' and uses all of the animals from 'zone Africa' for his study

What type of sampling is this?

Khloe is asked to take a sample of 5 students from each class in year 10

Score ___ / 9

GCSE STATISTICS: TERM 10.1 MIXED TOPIC TASKS

Week 5.2

Calculate the regular interval for a systematic sample of size 150 from a population of 3000	Calculate the regular interval for a systematic sample of size 10 from a population of 54	Calculate the regular interval for a systematic sample of size 22 from a population of 364
What type of sampling method is this? Dave is asked to take a sample of 10 employees from each of the building sites he visits	What type of sampling method is this? Mauve asks all of her family members to fill in her survey	What type of sampling is this? Sophie parks the cars into groups categorised by the date they were delivered to the scrap yard. She samples one of the groups for her audit
There are n fish in a lake Jody catches 20 fish and tags them He throws the fish back and catches another 10 the following day, of which 2 are tagged Estimate the number of fish in the lake	There are n smarties in a jar. Rachel takes out 10 of them and marks them with an 'x' She puts them back in the jar and shakes it well for 2 mins before taking out 20 smarties and finds that 8 are marked Estimate the number of smarties in the jar	There are n squirrels in a wood Priti traps 15 of them and tags them She then releases them back into the wood and 2 days later takes another sample of 15 to find that 4 are tagged. Estimate the number of squirrels in the wood

Score ___ / 9

GCSE STATISTICS: TERM 10.1 MIXED TOPIC TASKS

Week 6.1

What type of sampling method is this? Evo is asking everyone he sees at work if they would be willing to swap shifts or not if they were offered financial incentive	What type of sampling method is this? Vicki puts all of her cases into groups depending on which court they will be heard at. She then samples all of the cases that will be heard at Greystone Court	What type of sampling is this? Archie is asked to sample 4 dishes from each of the 12 restaurants.
There are n rabbits in a park James manages to capture 12 of them and tags them. He releases them back into the park and a while later takes another sample of 20 and finds that 3 are tagged. Estimate the number of rabbits in the park	There are n leaves collected from Sandra's front garden. She takes out 30 of the leaves and marks them with an 'x' After putting the marked leaves back in the bag and giving them a good mix she then takes a second sample of 10 leaves and finds only 1 is marked. Estimate the number of leaves collected	There are n fish in a lake Gord catches 18 fish and tags them He throws the fish back and later that day catches a further 12 fish, of which 3 are tagged. Estimate the number of fish in the lake
What is wrong with this question? How much money do your parents earn?	What is wrong with this question? How many hours of homework do you do a week? ☐ 1-2hours ☐ 3-4 hours ☐ 4-5 hours	What is wrong with this question? How much pocket money do you get each week? ☐ £0-£2 ☐ £2-£5 ☐ More than £5

Score ___ / 9

GCSE STATISTICS: TERM 10.1 MIXED TOPIC TASKS

Week 6.2

There are n fish in a lake Chris catches 35 fish and tags them He throws them back and then the following day he catches another 20 fish of which 6 are tagged. Estimate the number of fish in the lake	There are n lollypops in a jar Philippa take a sample of 10 lollypops and marks them with an 'x' She put the lollypops back and shakes the jar well. She then takes another sample of 10 lollypops of which 4 are marked. Estimate the number of lollypops in the jar	There are n lemurs in a nature reserve. Ruth catches 40 of them and tags them. She then releases the back and gives them a day to integrate before taking a second sample of 30 of which 15 are tagged Estimate the number of lemurs on the reserve
What is wrong with this question? Do you agree that Ed Sheeran is the best male artist of the 2020's? ☐ yes ☐ no	What is wrong with this question? How often do you go to the gym per week? ☐ 0-2times ☐ 2-4 times ☐ 4+ times	What is wrong with this question? How many times have you had detention this term? ☐ once ☐ 2-5 times ☐ More than 5 times
Which of these pieces of data appears to be an outlier? 3.2 37 31 32 39 35 32 36 30	Which of these pieces of data appears to be an outlier? 40 80 6000 30 90 70 50	Which of these pieces of data appears to be an outlier Red orange blue green steve red

Score ___ / 9

GCSE STATISTICS: TERM 10.1 MIXED TOPIC TASKS

Week 7.1

Is this an example of primary or secondary data? Counting the number of mistakes a student made in their exam paper as you mark it	Is this an example of a hypothesis? The older the car, the more miles it has travelled	Give an example of a sample frame that can be used to identify all of the adults in Dudley borough
Is this an example of qualitative discrete or continuous data? The number of watches worn by business men on a plane	Identify the population for the favourite colour of students in reception class RAJ	Number these random sample steps 1-4 Choose 30 random numbers using a RNG Choose the corresponding fish Ignore repeats and numbers > 200 Number all of the fish from 1-200
Is this an example of categorical, ranked or bivariate data? The height and weight of giraffes at Chester zoo	Which of these is an advantage of taking a census rather than a sample? Expensive Every member of the population is included	Calculate the number required for each strata for a sample size of 25 a: 18 b: 40 c: 21 d: 6

Score ___ / 9

GCSE STATISTICS: TERM 10.1 MIXED TOPIC TASKS

Week 7.2

Which of these is an advantage of taking a census rather than a sample? Time consuming More accurate	Calculate the number required for each strata for a sample size of 15 1p: 62 2p: 47 5p: 15 10p: 31	There are n tickets in a wind machine Karin catches 52 tickets are marks them with an 'x', then they go back into the machine Julie catches 34 tickets and 11 of them are marked Estimate the number of tickets in the machine
Give an example of a sample frame that can be used to identify all of the students in year 10 at Hillcrest School	Calculate the regular interval for a systematic sample of size 60 from a population of 350	What is wrong with this question? Do you agree that Strawberry is the best flavour yougurt? ☐ yes ☐ no
Number these random sample steps 1-4 Ignore repeats and numbers > 200 Number all of the post boxes from 1-200 Choose the corresponding post boxes Choose 35 random numbers using a RNG	What type of sampling method is this? Lucy is asked to take a sample of 5 children from each room at the nursery	Which of these pieces of data appears to be an outlier Harriet Faith Molly Sara 19

Score ___ / 9