Aberdare Community School

Mathematics Department

WJEC GCSE

Foundation – Non Calculator

Number

Timetables

Name: ....

Set: ....

Date: ....

Teacher: ....

17. Mr. Roberts is travelling to Hong Kong on business.

(a) There is a time difference between the UK and Hong Kong.
When the time is 6 am in the UK the time is 2 pm on the same day in Hong Kong.

(i) When it is 10 am in the UK what time is it in Hong Kong?

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(ii) Mrs. Roberts stays in the UK and has given her husband her time schedule, shown below.

6 am	*Get up, walk dog, breakfast*
6.30 am	*Leave home to go to work*
7.30 am	*Arrive at work*
11.30 am	*Finish work, set off to go home*
12.30 pm	*Arrive home for lunch*
2 pm	*Leave home for daily exercise class*
4 pm	*Home*
6 pm	*Go out to evening job*
9 pm	*Home*
10 pm	*Go to bed (don't disturb)*

Mr. Roberts will be in meetings most of the day in Hong Kong from 8 am until 11 am, then from 12 noon to 6 pm.
He plans to telephone his wife at a convenient time during the day.
During which time period should Mr. Roberts telephone his wife?
Give your answer in UK and Hong Kong times.

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[4]

(b) Mr. Roberts is going to be in Hong Kong for 4 nights.
He finds two suitable hotels on the internet.

Hotel Gelton 3*	Bed and breakfast £80 per night per person

Hotel Bear 3*   Dinner, bed and breakfast £107 per night per person
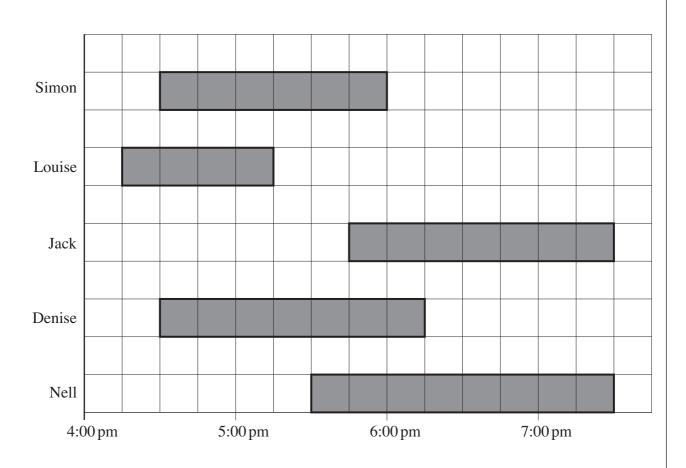
*****Special Offer*****

Stay 3 nights and your fourth night is free!

Which hotel should Mr. Roberts choose? You must show your working and give a reason for your answer.

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[4]

5. The chart shows the times five friends spent at a gym.

(a) Who was the first person to arrive at the gym?

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[1]

(b) For how long was Denise at the gym?

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[2]

(c) Who stayed at the gym for the longest time?

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[1]

(d) Between which times were four of the friends at the gym at the same time?

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[1]

11. The following are parts of rail timetables between Swindon and Coventry and between Coventry and Durham.

Swindon		14:29	15:29	16:29	17:29	18:29
Reading	arrive	15:00	16:00	17:00	17:55	19:01
	depart	15:11	16:11	17:11	18:11	19:11
Coventry		16:22	17:23	18:22	19:22	20:25

Coventry		16:27	16:49	17:27	17:49	18:49
Birmingham	arrive	16:48	17:16	17:48	18:17	19:17
	depart	17:03	17:30	18:03	18:30	19:30
Durham		20:22	20:30	21:25	21:39	22:30

(a) Denise catches the 15:29 train from Swindon to Coventry.
How long does the journey take?

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[2]

(b) John arrives at Reading station at 14:55.
He travels on the next train to Coventry for a meeting which, including the walk to and from the station, takes a total of 1 hour 20 minutes.
He then catches the next train to Durham.
When does he arrive at Durham?

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[4]

10. *(a)* *You will be assessed on the quality of your written communication in this part of the question.*

Some mobile phones show a number of world clocks.

London

New York

Sydney

Monday
11:30

Monday
06:30

Monday
22:30

When it is 3 p.m. on Wednesday in New York, what day and time will it be in Sydney? Explain your reasoning.

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[5]

12. Below are parts of two train time-tables.

Swansea to Bristol Parkway

Swansea	10:28	10:55	11:28	11:55
Neath	10:39	11:05	11:39	12:05
Port Talbot	10:47	11:12	11:47	12:12
Bridgend	10:59	11:25	11:59	12:25
Cardiff	11:22	11:47	12:22	12:47
Newport	11:39	12:08	12:39	13:08
Bristol Parkway	11:59	12:30	12:59	13:30

Bristol Parkway to Sheffield

Bristol Parkway	11:40	12:40	13:40	14:40
Cheltenham	12:10	13:12	14:10	15:11
Birmingham	13:03	13:58	14:56	15:59
Derby	13:42	14:40	15:39	16:40
Sheffield	14:17	15:18	16:17	17:19

(a) Sophie gets on the 10:55 from Swansea at Bridgend and gets off at Newport. How long should her journey take?

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.... [2]

(b) David lives in Port Talbot and needs to get to Birmingham by half past three in the afternoon.

(i) What is the latest train he can catch from Port Talbot to do this?

.... [1]

(ii) How long should he have to wait at Bristol Parkway?

.... [1]

(iii) On the day he travelled, owing to signal problems, the Swansea trains were 10 minutes late arriving at Bristol Parkway and the trains to Sheffield were 15 minutes late leaving Bristol Parkway.
Given that the trains kept to their normal speed, at what time did David arrive in Birmingham? Give a full explanation for your answer.

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[2]

10. *You will be assessed on the quality of written communication in this question.*

A chef needs to cook a 4·5 kilogram turkey.

The following rule is used to calculate the cooking time:

"Cook for 40 minutes per kilogram and then add an extra 25 minutes."

The chef wants the turkey to be ready at 1:30 p.m.

What is the latest time that the chef should begin cooking the turkey?

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[6]

9. Hamish is in London one Tuesday afternoon.
He looks at the world clock shown below.

World clock		
London	New York	Sydney
13:38 Tuesday	08:38 Tuesday	21:38 Tuesday

(a) Hamish has a plane to catch in 6 hours 34 minutes time.
At what time does his plane leave, in New York time?

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[2]

(b) Hamish decides to make a telephone call to Sydney before he leaves.
He makes the call at 17:05 in London.
What time and day is this in Sydney?

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Time .... Day ....

[3]

10.

10. The table shows typical ranges for fares and journey times for London taxis.

London Taxis		Tariff 1	Tariff 2	Tariff 3
Distance (up to)	Approximate journey time	Monday to Friday 06:00 to 20:00	Monday to Friday 20:00 to 22:00 Saturday and Sunday 06:00 to 22:00	Every night 22:00 to 06:00
1 mile	6 - 13 mins	£5.60 - £8.60	£5.60 - £8.80	£6.60 - £8.80
2 miles	10 - 20 mins	£8.40 - £13.40	£8.80 - £13.60	£10.20 - £14.40
4 miles	16 - 30 mins	£15 - £21	£16 - £22	£17 - £27
6 miles	28 - 40 mins	£23 - £28	£28 - £31	£28 - £32

Example:
A journey of 5 miles at midnight would cost between £28 and £32, depending on the length of time of the journey.

Use the table to answer the following questions.

(a) Peter hires a taxi on a Thursday at 10:25 a.m. for a journey of 2 miles.
What is the least amount he should be charged and what would be the earliest time he would get there? [2]

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Least amount charged .... Earliest time ....

(4370-03)

(b) Joanna and her 4 friends are out together on a Friday at 23:30 p.m.

They are staying at the same hotel, which is about $3\frac{1}{2}$ miles away.

They could hire a taxi or they could buy tickets on the underground tube costing £4 each.
For the 5 friends, explain how it is possible that hiring a taxi might
- save money, or
- cost more money.

You must show all your working for both of these possibilities. [4]

(c) Sophie is due to fly from Glasgow to San Francisco.
She arrives at Glasgow airport on Wednesday at 13:40.
She has to wait 4 hours 25 minutes for her flight.

It takes 13 hours to fly between Glasgow and San Francisco.
She knows that the time in Glasgow is 8 hours ahead of the time in San Francisco.
For example, when it is 10:00 a.m. in Glasgow it is 2:00 a.m. in San Francisco.

On which day and at what time does Sophie expect to arrive in San Francisco airport?
You must show all your working. [3]

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Day .... Time ....

6. *You will be assessed on the quality of your written communication in this question.*

Emma is cooking a ready-prepared meal which must be served at 7:30 p.m.

The instructions for each step are given in this table.

Pasta Bake

Oven cook: Temperature 180°C

Instructions
Heat for 35 minutes in oven.
Remove from oven and stir.
Heat for a further 15 minutes.
Remove from oven and leave to
stand for 2 minutes before serving.

Emma has already heated the oven to the correct temperature.

Write a timetable to show the time to start each step so that Emma is ready to serve the meal at 7:30 p.m. [5]