

## AFRICAN INSTITUTE FOR MATHEMATICAL SCIENCES

## SCHOOLS ENRICHMENT CENTRE (AIMSSEC)

### **AIMING HIGH**

## TIMES 3

If all these times are between noon and midnight match the times given on the 12 hour clock with the times given on the 24 hour clock. Put them in order. It is easier to solve this puzzle if you use pages 3, 4, 5 and 6 and cut out the cards so that you can sort them into sets.

Times as shown on the 12 hour clock		
O 5.50	P 5.15	Q 11.35
R 12.20	S 4.05	T 10.45
U 1.25	V 7.40	W 3.10
X 1.55	Y 7.00	Z 9.30

Afternoon times as shown on the 24 hour clock		
13	14	15
16.05	17.50	21.30
16	17	18
23.35	19.40	13.25
19	20	21
15.10	00.20	19.00
22	23	24
22.45	13.55	17.15

Now match all the times with the times shown on the clock and the times as we speak about them.

1 (1) 12 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	2 12 12 12 3 3 3 4 5 5 5 5 5	3 10 2 1 2 9 8 7 6 5 4 1
4 11 12 1 10 2 3 3 8 4 4	5 11 12 2 3 3 3 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	6 11 12 1 2 3 3 3 4 4 4 6 5 5 4 4
7 11 12 1 2 3 3 4 4 4 5 5 5 4 4	8 11 12 1 2 1 9 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	9 11 12 1
10 11 12 1 9 3 3 4 8 7 6 5 4	11 1 2 2 3 3 4 4 4 5 6 5 4 4	12   12   12   10   2   3   4   4   4   4   4   4   4   4   4

A Twenty five to twelve	B Seven o'clock	C Quarter past five
D Twenty past twelve	E Half past nine	F Ten to six
G Quarter to eleven	H Twenty five past one	I Five past four
J Ten past three	K Five to two	L Twenty to eight

Describe a long journey, your own journey or a journey for a sports or music star or team.

Explain what happens at different times, how long is spent walking or waiting for buses, trains or flights, and how long the stages of the journey take.

# Help

The short hand on the clock face points to the hour and the long hand points to the minutes.

So clock 1. Shows that the time is between 9 o'clock and 10 o'clock and it also shows 30 minutes so the time is 9.30. You should match the picture of the clock number 1 with card Z.

Clock 1 shows that the time is between 9 o'clock and 10 o'clock and it also shows 30 minutes so we can say that the time is 9.30 (card Z).

Also we know that there are 60 minutes in an hour so there are 30 minutes in half an hour and 15 minutes in a quarter of an hour. So we can say 9.30 or half past nine and we can match the picture of the clock number 1 with card E.

At midnight we start a new day and the twelve hours from midnight until noon are the morning hours – **BEFORE NOON** which, in Latin, are **ANTE MERIDIEM (am)** so for example 9 o'clock in the morning is 9.00 am.

From 12 noon until midnight **AFTER NOON** or **POST MERIDIEM** (**pm**), the time is given in two ways: the 12 hour clock shows 1.00pm, 2.00pm .... up to 11.00pm and midnight but the same times on the 24 hour clock are 13.00h, 14.00h .... up to 23.00h and midnight.

Clock 1 shows that the time is between 9 o'clock and 10 o'clock that is 9.30am in the morning on the 12 hour clock or 9.30 pm in the evening, so you should match the picture of the clock number 1 with card Z. It also shows 30 minutes so the time is half past nine (card E) and, if that is in the evening it is 21.30h on the 24 hour clock (card 15).

#### Extension

1. Write down the times you usually do things most days and draw pictures of clocks showing those times.

What time do you usually get up?

What time do you arrive at school?

What times do you have meals?

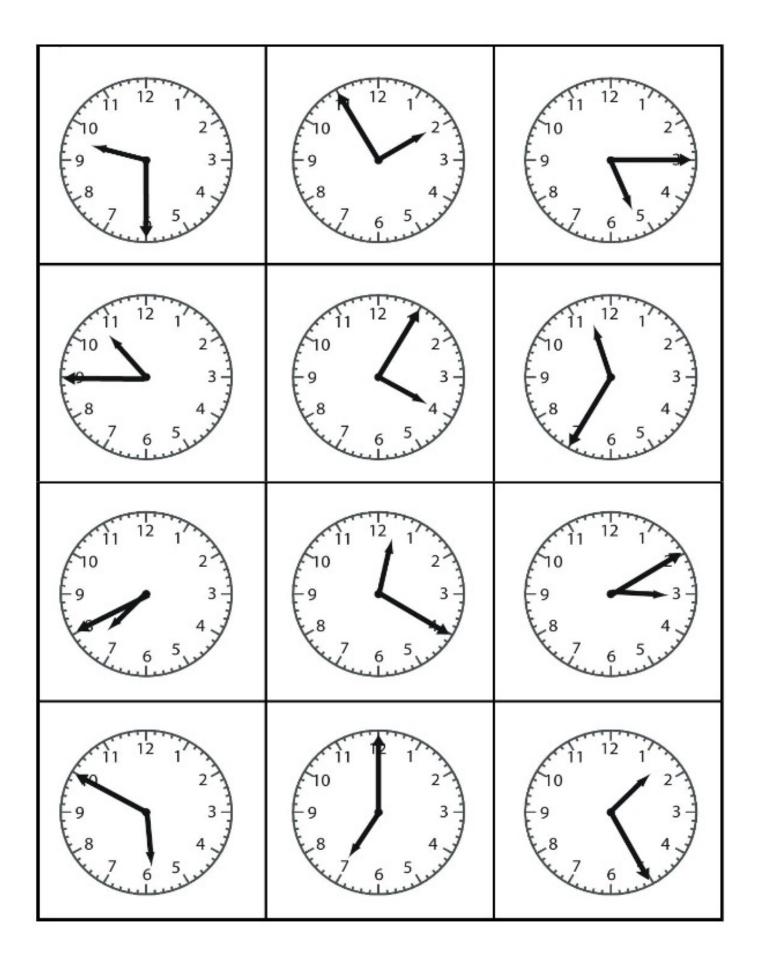
Add some more times to your list.

2. Think of a journey that you do and think about the time it takes.

It might be your journey to school if that is a long one, or it might be a journey to another town to go shopping or to visit relatives or friends. If you are not sure of how long the journey takes perhaps you can ask people that you go with.

Then write a short story about the journey including the times, or draw some pictures of the journey including pictures of clocks showing the times.

3. You might plan a journey using timetables (such as bus, train or airline timetables) or use the internet. You might also work out and compare the cost and time taken with different forms of transport and routes.



Half past nine	Five to two	Quarter past five
Quarter to eleven	Five past four	Twenty-five to twelve
Twenty to eight	Twenty past twelve	Ten past three
Ten to six	Seven oʻclock	Twenty-five past one

Times as shown on the 12 hour clock		
O	P	Q
5.50	5.15	11.35
R	S	T
12.20	4.05	10.45
U	v	w
1.25	7.40	3.10
X	Y	Z
1.55	7.00	9.30

Afternoon times as shown on the 24 hour clock		
13	14	15
16.05	17.50	21.30
16	17	18
23.35	19.40	13.25
19	20	21
15.10	00.20	19.00
22	23	24
22.45	13.55	17.15