FOUNDATION

1.3 Time: Test Pack

EDEXCEL 1MA1 · Calculator allowed · about 60 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 A train leaves at 12:00 and arrives at 13:03. How long is the journey? Give your answer in hours and minutes.

(Total for Question 1 is 2 marks)

2 A job takes 310 minutes. Write this time in hours and minutes.

(Total for Question 2 is 2 marks)

3 A plumber charges £8 for each hour worked. A job takes 1 hour 36 minutes. Work out the total charge.

(Total for Question 3 is 3 marks)

4 A plumber charges £8 for each hour worked. A job takes 4 hours 42 minutes. Work out the total charge.

(Total for Question 4 is 3 marks)

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5 A plumber charges £8 for each hour worked. A job takes 2 hours 24 minutes. Work out the total charge.

(Total for Question 5 is 3 marks)

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6 Write down 12:00 noon in 24-hour clock notation.

(Total for Question 6 is 1 mark)

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7 Write down 00:05 in 12-hour clock notation. Include am or pm.

(Total for Question 7 is 1 mark)

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8 Work out the time 14:10 minus 50 minutes.

(Total for Question 8 is 1 mark)

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9 Kwame's football training finishes at 6:40 pm. Write down 6:40 pm in 24-hour clock notation.

(Total for Question 9 is 1 mark)

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10 Work out 205 minutes in hours and minutes.

(Total for Question 10 is 1 mark)

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11 A train is due to arrive at 9:10 but arrives 15 minutes early. Work out the actual arrival time.

(Total for Question 11 is 1 mark)

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12 A ferry leaves at 23:40. The next ferry leaves at 01:20. How long does a passenger wait for the next ferry?

(Total for Question 12 is 1 mark)

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13 A film starts at 23:20 and finishes at 01:10 the next day. Work out the length of the film.

(Total for Question 13 is 2 marks)

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14 Kayla finishes her evening shift at 23:42. Her next shift begins at 00:08. Work out how many minutes she has between shifts.

(Total for Question 14 is 1 mark)

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15 Show that a train departing at 07:52 and taking 1 hour 48 minutes arrives at exactly 09:40.

(Total for Question 15 is 2 marks)

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16 A New Year's Eve fireworks display starts at 23:35 and finishes at 00:50 the next day. Work out the length of the display.

(Total for Question 16 is 2 marks)

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17 A bus service starts at 07:30 and runs every 25 minutes thereafter. A passenger arrives at the stop at 09:12. How many minutes must the passenger wait for the next bus?

(Total for Question 17 is 2 marks)

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18 A student calculates the length of a lecture that starts at 13:45 and ends at 15:20 like this:
15 - 13 = 2 hours
45 - 20 = 25 minutes
Answer: 2 hours 25 minutes

The student's answer is wrong. Work out the error in the method and give the correct duration.

(Total for Question 18 is 2 marks)

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19 A flight departs at 22:50 and has a flying time of 4 hours 30 minutes. Work out the arrival time in 24-hour clock.

(Total for Question 19 is 2 marks)

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20 The table shows a Saturday bus timetable between Sherwood and the Retail Park.

Sherwood	09:05	09:35	10:05	10:35
City Centre	09:20	09:50	10:20	10:50
Retail Park	09:42	10:12	10:42	11:12

Aaliyah arrives at the City Centre stop at 09:55. She needs to reach the Retail Park by 10:45. Work out which bus she should catch from City Centre, and the time she will arrive at the Retail Park.

(Total for Question 20 is 3 marks)

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21 A night bus leaves Cardiff at 23:15. The journey to Glasgow takes 6 hours 50 minutes. Work out the arrival time, in 24-hour clock.

(Total for Question 21 is 2 marks)

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22 Ronan can travel from home to a concert in two ways.
Route A (cycle): leave home at 18:35; the ride takes 28 minutes.
Route B (bus): catch the bus that leaves the stop at 18:20; the bus takes 24 minutes to the town centre, then it is a 9-minute walk to the venue.
The concert starts at 19:00.
Work out the arrival time for each route and state which route (if either) gets Ronan to the concert before it starts.

(Total for Question 22 is 3 marks)

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23 A courier collects a parcel on Wednesday at 21:40. The guaranteed delivery time is 21 hours 35 minutes after collection. On which day and at what time will the parcel be delivered?

(Total for Question 23 is 3 marks)

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Mark scheme · 1.3 Time: Test Pack

A correct answer earns full marks unless the question asks for working, a method, proof or explanation.

Question 1

method to find the time difference **M1**

1 hour 3 minutes cao **A1**

Answer: 1 hour 3 minutes

Question 2

310 / 60 or 5 hours seen **M1**

5 hours 10 minutes **A1**

Answer: 5 hours 10 minutes

Question 3

converts 36 minutes to 0.6 hours **M1**

multiplies by 8 **M1**

£12.80 cao **A1**

Answer: £12.80

Question 4

converts 42 minutes to 0.7 hours **M1**

multiplies by 8 **M1**

£37.60 cao **A1**

Answer: £37.60

Question 5

converts 24 minutes to 0.4 hours **M1**

multiplies by 8 **M1**

£19.20 cao **A1**

Answer: £19.20

Question 6

12:00 cao **B1**

Answer: 12:00

Question 7

12:05 am cao **B1**

Answer: 12:05 am

Question 8

13:20 cao **B1**

Answer: 13:20

Question 9

18:40 cao **B1**

Answer: 18:40

Question 10

3 hours 25 minutes cao **B1**

Answer: 3 hours 25 minutes

Question 11

8:55 cao **B1**

Answer: 8:55

Question 12

1 hour 40 minutes cao **B1**

Answer: 1 hour 40 minutes

Question 13

calculate minutes across midnight, e.g. 23:20 to 00:00 = 40, then to 01:10 = 70, total 110 minutes oe **M1**

1 hour 50 minutes cao **A1**

Answer: 1 hour 50 minutes

Question 14

26 minutes cao **B1**

Answer: 26 minutes

Question 15

adds the journey time to the departure time with a complete correct method, e.g. 07:52 + 1:48 oe **M1**

09:40 obtained with every step shown cso **C1**

Answer: 09:40 (shown)

Question 16

calculate minutes across midnight, e.g. 23:35 to 00:00 = 25, then to 00:50 = 50, total 75 minutes oe **M1**

1 hour 15 minutes cao **A1**

Answer: 1 hour 15 minutes

Question 17

identify next bus time after 09:12 is 09:35 (07:30, 07:55, 08:20, 08:45, 09:10, 09:35) oe **M1**

23 minutes cao **A1**

Answer: 23 minutes

Question 18

identify the error: the minutes should be subtracted as 20 - 45, which needs borrowing an hour since 20 is less than 45 oe **M1**

1 hour 35 minutes cao **A1**

Answer: The student did not borrow an hour when subtracting the minutes; the correct duration is 1 hour 35 minutes.

Question 19

add duration crossing midnight, e.g. 22:50 + 4:30 oe **M1**

03:20 cao **A1**

Answer: 03:20

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Question 20

recognise the 09:50 departure from City Centre has already gone, since Aaliyah arrives at 09:55 oe	**M1**
identify 10:20 as the next available departure from City Centre oe	**M1**
10:20 bus, arriving at the Retail Park at 10:42 cao	**A1**

Answer: The 10:20 bus from City Centre, arriving at the Retail Park at 10:42

Question 21

add duration crossing midnight, e.g. 23:15 + 6:50 oe	**M1**
06:05 cao	**A1**

Answer: 06:05

Question 22

calculate Route A arrival: 18:35 + 0:28 = 19:03 oe	**M1**
calculate Route B arrival: 18:20 + 0:24 = 18:44, then + 0:09 = 18:53 oe	**M1**
compare both arrivals to the 19:00 start and conclude Route B arrives in time (18:53) but Route A does not (19:03) oe	**B1**

Answer: Route A arrives at 19:03 (after the concert starts); Route B arrives at 18:53 (before the concert starts). Only Route B gets Ronan there in time.

Question 23

add 21 hours crossing midnight to reach the next day's time: 21:40 + 21:00 = Thursday 18:40 oe	**M1**
add the remaining 35 minutes to give 19:15 oe	**M1**
delivered Thursday 19:15 cao	**A1**

Answer: Thursday 19:15

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