Ivy Education

Est. 2010

11+ Maths Exam Paper 1

11M.1

Name:
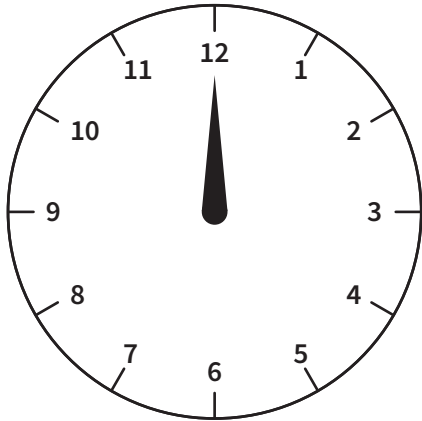...

ⓘ
Spend 45 minutes on this paper.

It is worth 95 marks

- You will need a pencil and ruler.

- Calculators are **not** allowed.

- Write your answers in the spaces provided on this paper.

- Use any square space on the page for working out.

- Make sure to include units in your answers where necessary.

- Try to answer as many questions as you can.

- If you cannot answer a question, leave it and move onto the next.

This paper includes 11 pages including front cover.

6. The diagram shows a broken clock with one hand.

a. The hand rotates clockwise through 150°.
Which number will the hand be pointing at? *(2)*
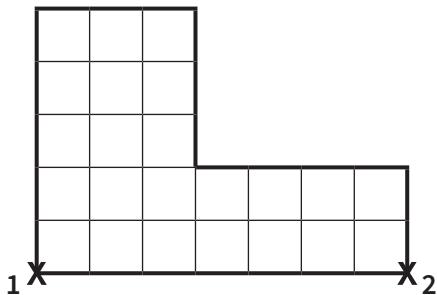
....

b. The clock is working incorrectly; the hand rotates
at a rate of 12 revolutions per minute.

How many revolutions will the hand make when
the clock is running for two hours? *(2)*

....

7. The shape within the diagram shows a farmer's field.

The field is made up of a number of square vegetable patches,
as shown. If the distance from corner 1 to corner 2 is 21m, what is
the total area of the field? *(3)*

....

17. There are 165 chickens on a farm. Two thirds of the chickens are brown.
The rest of the chickens are black.

    a. What is the ratio of brown chickens to black chickens? *(2)* ....

    b. How many chickens are black? *(2)* ....

18. Four-sixths of a number is 48. What is the number? *(2)*

....

19. What number is halfway between -6 and 10? *(2)*

....

20. In Roger's school, all pupils in year 7 must learn to play a musical instrument or opt to join the Duke of Edinburgh award programme ("DofE"). Pupils cannot opt for both learning to play a musical instrument and DofE.

Roger asked 250 year 7 pupils whether they wanted to opt for learning to play a musical instrument or DofE next year.

30% of the pupils said that they wanted to learn to play a musical instrument.

⅖ of the pupils said that they wanted to opt for DofE.

The rest of the pupils said that they hadn't decided yet.

How many pupils hadn't decided whether to opt for learning to play a musical instrument or DofE yet? *(3)*

....

21. A cube has edge lengths of 4m.

    a. What is the volume of the cube? *(2)* ....

    b. A second cube has a volume of 125m^3.
    what is the total surface area of the second cube? *(2)* ....

25. Laura's Ferrari can reach a top speed of 300km/h.
Assuming that it can maintain this speed, how far can it travel in 5 minutes? *(2)*

....

26. Here is a section of the Monday to Friday timetable for the train route
from London Euston to Manchester Piccadilly.

London Euston to Manchester Piccadilly						
London, Euston	05:27	06:17	06:36	06:55	07:07	07:20
Watford Junction	05:45	-	06:54	-	-	-
Milton Keynes Central	06:10	06:47	07:19	07:25	07:37	07:50
Rugby	06:42	07:19	07:51	07:57	08:09	08:22
Stafford	07:03	-	08:12	-	-	-
Stoke-on-Trent	07:20	07:45	08:29	08:23	08:35	08:48
Macclesfield	07:31	07:56	08:40	08:34	08:46	08:59
Crewe	07:40	08:05	08:49	08:43	08:55	09:08
Stockport	07:47	-	08:56	-	-	-
Manchester Piccadilly	08:09	08:28	09:18	09:06	09:18	09:31

a. James caught a train from Watford Junction at 06:54.
What time does he arrive at Stoke-on-Trent? *(2)*

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b. Sarah wants to travel from London to Crewe.
If she catches the train at 07:07 how long will her journey take? *(2)*

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c. How long does it take for the 06:47 train from Milton Keynes Central
to travel to Macclesfield? *(2)*

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