

Surname						Other Names					
Centre Number						Candidate Number					
Candidate Signature											

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General Certificate of Secondary Education
June 2004



MATHEMATICS (MODULAR) (SPECIFICATION B) 33005/F1
Module 5 Foundation Tier
Paper 1 Non-Calculator

F

Tuesday 8 June 2004 1.30 pm to 2.30 pm

<p>In addition to this paper you will require:</p> <ul style="list-style-type: none"> mathematical instruments. <p>You must not use a calculator.</p>	
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For Examiner's Use	
Pages	Mark
3	
4 – 5	
6 – 7	
8 – 9	
10 – 11	
12 – 13	
14 – 15	
16 – 17	
TOTAL	
Examiner's Initials	

Time allowed: 1 hour

Instructions

- Use blue or black ink or ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer **all** questions in the spaces provided.
- Do all rough work in this booklet.

Information

- The maximum mark for this paper is 60.
- Mark allocations are shown in brackets.
- Additional answer paper, graph paper and tracing paper will be issued on request and must be tagged securely to this answer booklet.

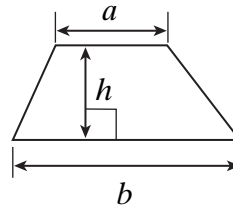
Advice

- In all calculations, show clearly how you work out your answer.

Formula Sheet: Foundation Tier

You may need to use the following formula:

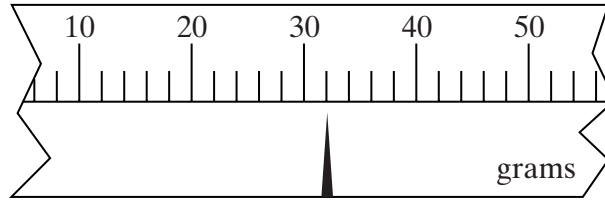
Area of trapezium = $\frac{1}{2}(a+b)h$



Answer **all** questions in the spaces provided.

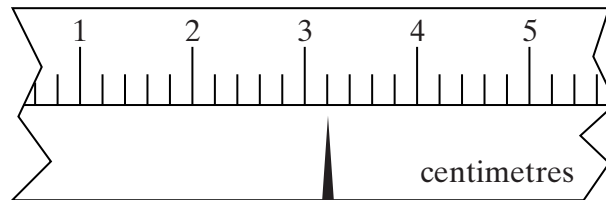
1 (a) What value is shown by the pointer in each of these diagrams?

(i)



Answer grams (1 mark)

(ii)



Answer centimetres (1 mark)

(b) Write your answer to part (a)(ii) in millimetres.

.....

Answer millimetres (1 mark)

Turn over 

- 2 (a) Write down two multiples of 4.

Answer and (1 mark)

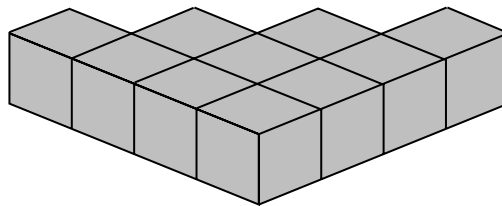
- (b) Write down two multiples of 7.

Answer and (1 mark)

- (c) Write down a number which is a multiple of both 4 and 7.

Answer (1 mark)

- 3 The solid shape below is made out of cubes.



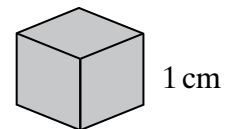
- (a) How many cubes are there?

.....
.....

Answer (1 mark)

- (b) The side of each cube measures 1 cm.

Write down the volume of the solid shape above.



Answer (1 mark)

4 Given that $6 \times 3 = 18$ and $3 \times 6 = 18$,

(a) write down **two** other multiplications which give the answer 18

.....
.....

Answer (1 mark)

(b) write down the values of

(i) 600×3

.....

Answer (1 mark)

(ii) 60×300

.....

Answer (1 mark)

(iii) $180 \div 3$

.....

Answer (1 mark)

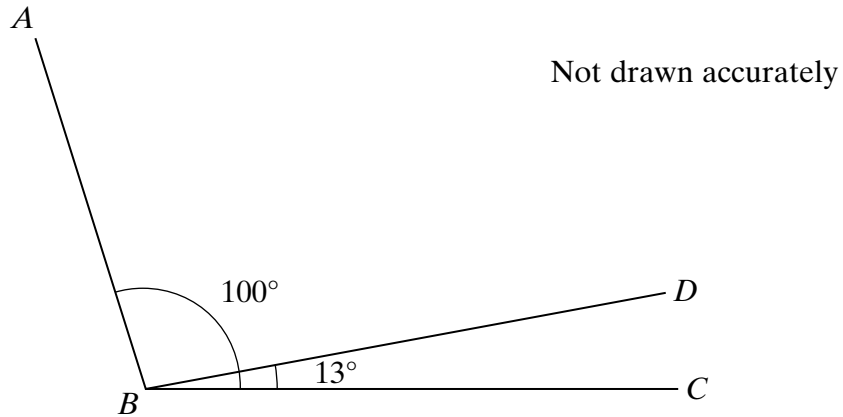
(c) express $\frac{3}{18}$ as a fraction in its simplest form.

.....

Answer (1 mark)

Turn over 

- 5 Angle $ABC = 100^\circ$
Angle $DBC = 13^\circ$



- (a) What type of angle is ABC ?

Answer (1 mark)

- (b) What type of angle is DBC ?

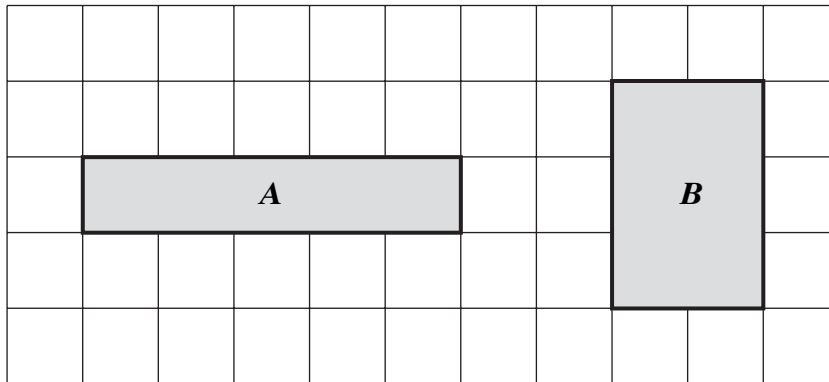
Answer (1 mark)

- (c) Work out the size of angle ABD .

.....
.....

Answer degrees (1 mark)

6 The diagram shows two rectangles, *A* and *B*.



Which rectangle has the greater perimeter?
You **must** show your working.

.....

.....

.....

.....

Answer (3 marks)

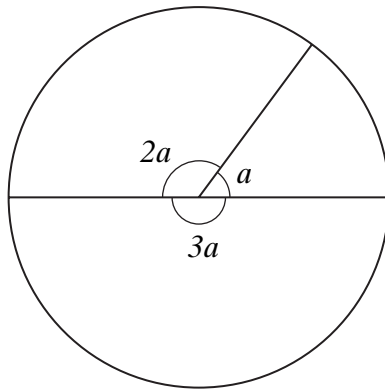
TURN OVER FOR THE NEXT QUESTION

7 (a) Simplify $a + 2a + 3a$

.....

Answer (1 mark)

(b) A circle is divided into 3 parts as shown.



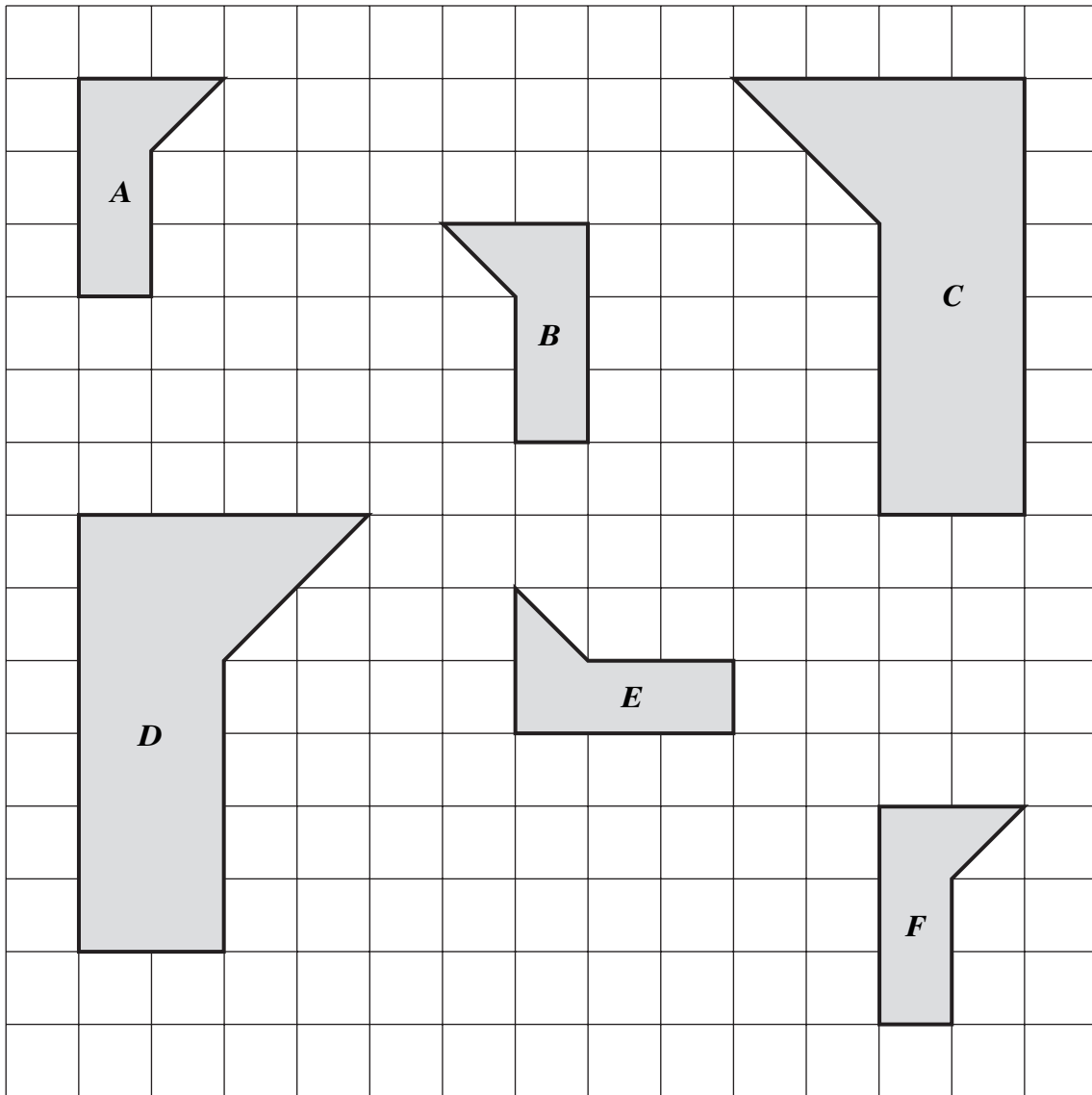
Not drawn accurately

Work out the value of angle a .

.....

Answer degrees (2 marks)

8 The grid shows six shapes *A*, *B*, *C*, *D*, *E* and *F*.



Write down the letters of the shapes which are congruent to shape *A*.

Answer (2 marks)

Turn over ►

9 Use the following conversions to change 2 tonnes into pounds (lb).

$\begin{aligned} 1 \text{ tonne} &= 1000 \text{ kg} \\ 1 \text{ kg} &= 2.205 \text{ pounds (lb)} \end{aligned}$

.....

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.....

Answer pounds (lb) (3 marks)

10 Write down the values of

(a) 4^2

.....

Answer (1 mark)

(b) $\sqrt{81}$

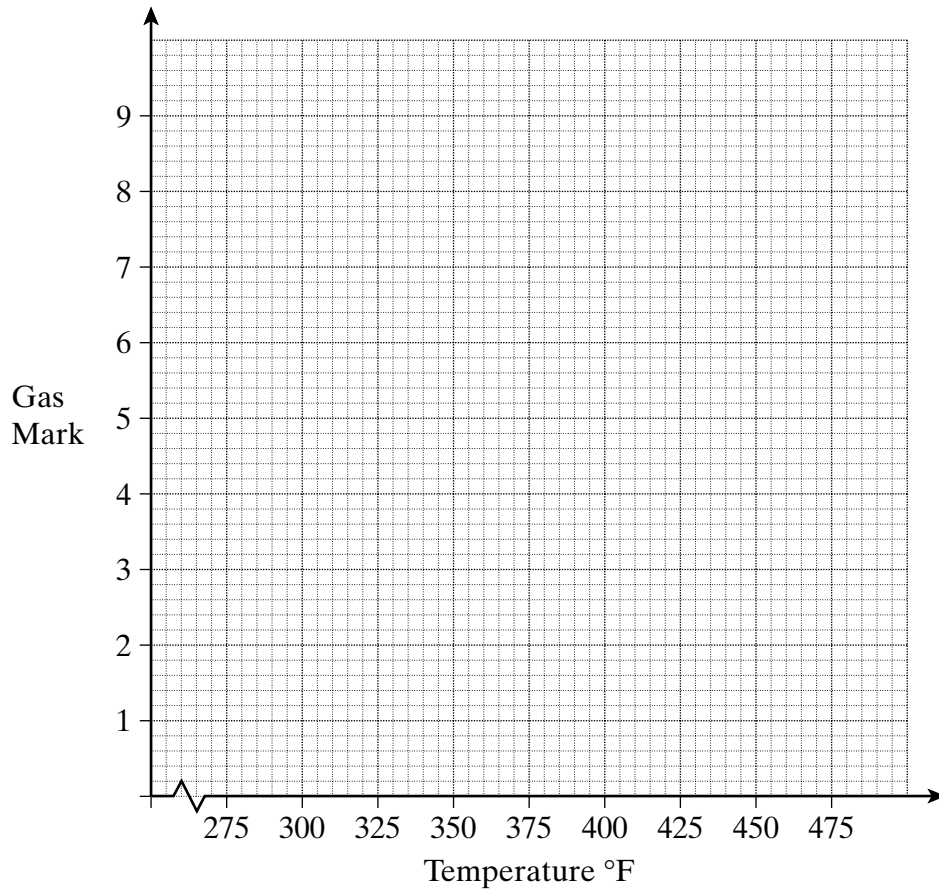
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Answer (1 mark)

11 On a gas oven

300°F = Gas Mark 2
and 450°F = Gas Mark 8

(a) Plot these values on the grid.



(2 marks)

(b) Join your points with a straight line.

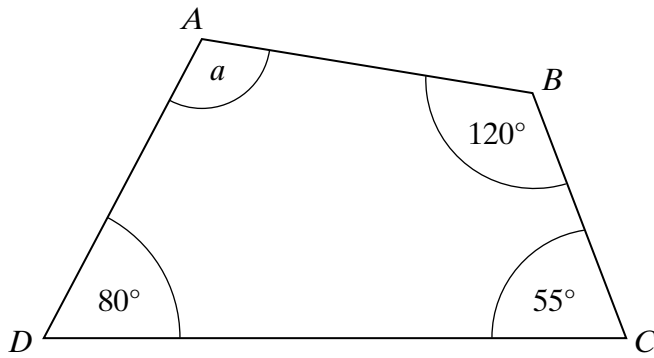
(1 mark)

(c) Using your conversion graph, or otherwise, work out the Gas Mark for a temperature of 375°F.

.....
.....

Answer Gas mark (2 marks)

12 $ABCD$ is a quadrilateral.



Not drawn accurately

Work out the value of a .

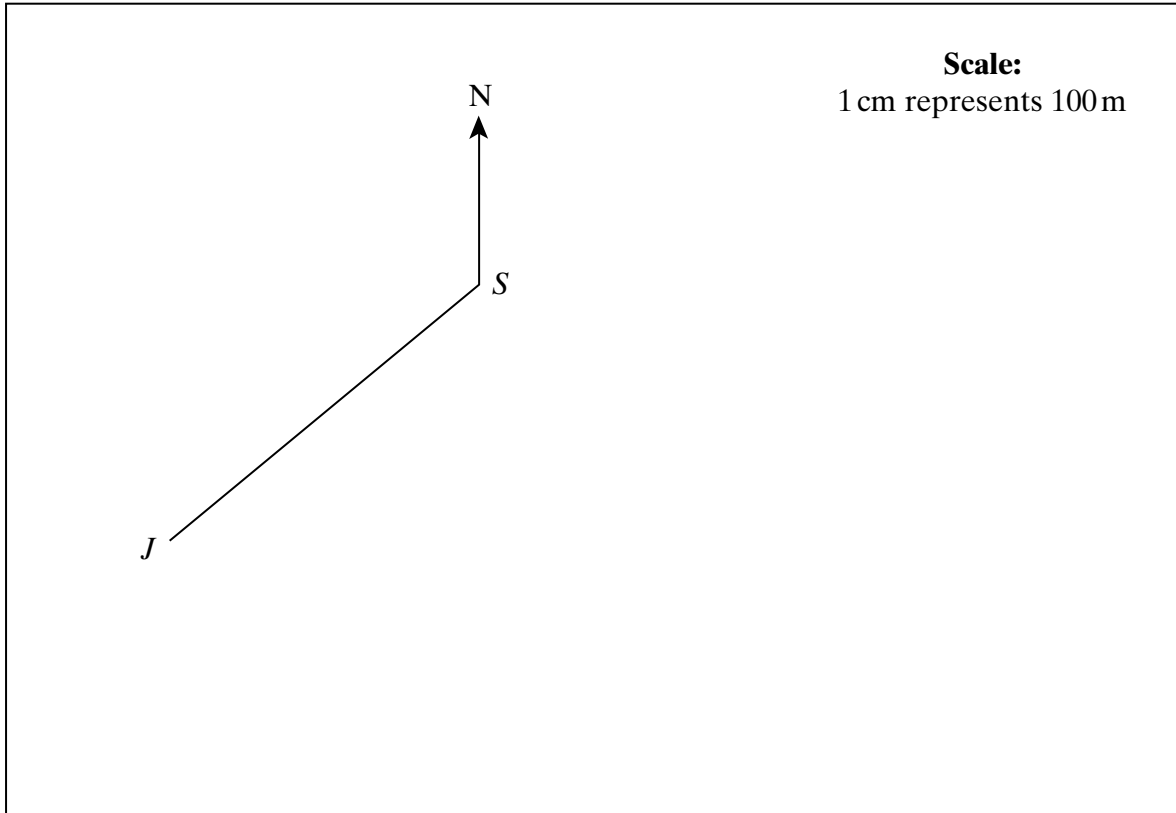
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Answer degrees (2 marks)

- 13** The diagram shows the positions of Joe’s house, *J*, and the local shop, *S*.
The diagram is drawn to scale.
1 cm represents 100 m.



- (a) Use the diagram to calculate the actual distance from Joe’s house to the shop.

.....
.....

Answer metres (2 marks)

- (b) Measure and write down the three figure bearing of Joe’s house from the shop.

.....

Answer ° (1 mark)

- (c) Kate’s house, *K*, is 450 metres from the shop on a bearing of 120°. Mark the position of *K* on the diagram.

(2 marks)

7

Turn over ►

14 Which of these fractions is closest to $\frac{1}{4}$?

You **must** show your working.

$$\frac{1}{5} \quad \frac{3}{10} \quad \frac{7}{20} \quad \frac{7}{30}$$

.....

.....

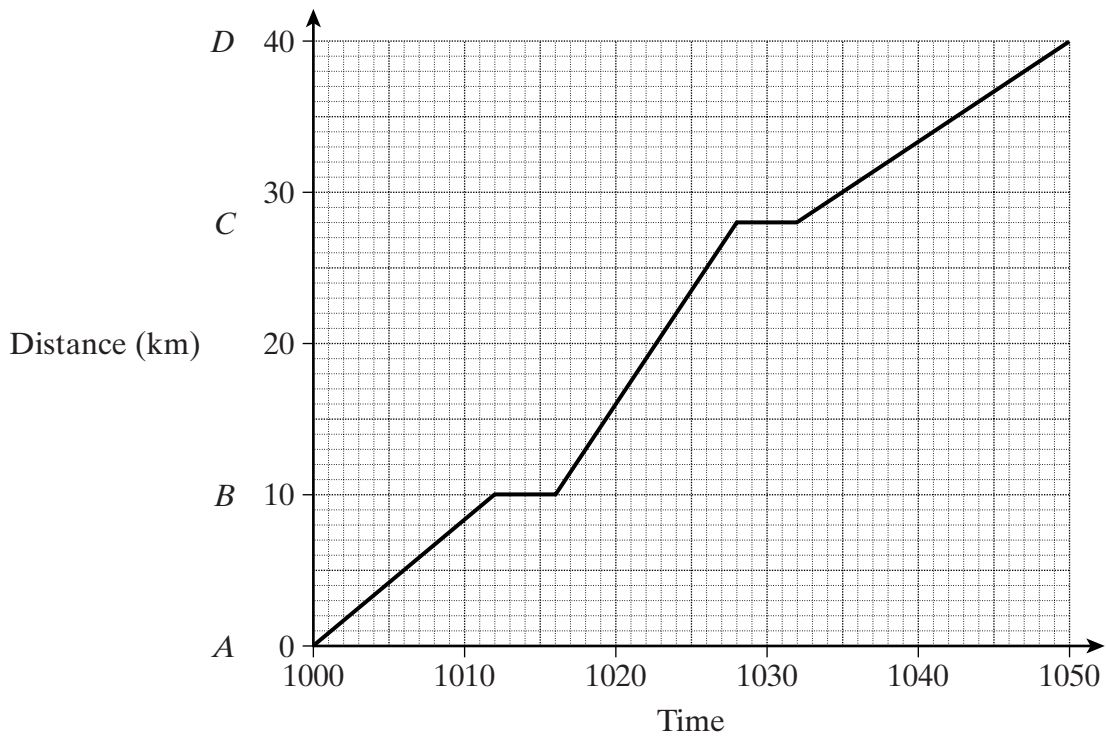
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Answer (3 marks)

15 The graph shows a train journey from *A* to *D*, stopping at *B* and *C*.



(a) What is the time when the train leaves *B*?

Answer (1 mark)

(b) How far is it from *A* to *C*?

Answer km (1 mark)

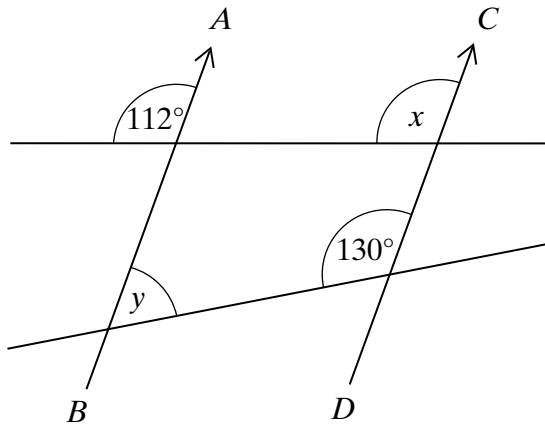
(c) During which part of the journey did the train travel the fastest?
Explain your answer.

Answer

Explanation

.....
(2 marks)

16 In the diagram, AB is parallel to CD .



Not drawn accurately

- (a) State the value of x .
Give a reason for your answer.

Answer degrees

Reason

.....

(2 marks)

- (b) Find the value of y .

.....

.....

Answer degrees (2 marks)

17 Solve these equations

(a) $4x - 7 = 5$

.....
.....

Answer $x =$ (2 marks)

(b) $2(y + 5) = 28$

.....
.....
.....

Answer $y =$ (3 marks)

(c) $7z + 2 = 9 - 3z$

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.....
.....

Answer $z =$ (3 marks)

END OF QUESTIONS

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