Level 1
Mathematics
Examination 2

SAMPLE

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Creator: Judy Anders Title: Level 1 Mathematics Examination 2 ISBN: 9781922881014 (eBook) Series: Mathematics Examinations with detailed answers for High Schools Target Audience: School age. Secondary. Subject: Mathematics Other Creators: Barbara Healy, William Paul Healy	All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form by any means whatsoever without the prior permission of the copyright owner. Apply in writing to the publishers.

About the Authors: Barbara Healy BSc BEd and William Paul Healy BSc BA Dip Ed are principal writers for Kilbaha Education. They are experienced classroom teachers of mathematics with specialised skills in writing assessment questions and detailed answers for all levels of mathematics. Together they have been creating mathematics content for Australian schools for more than 30 years. Teachers and parents use their highly regarded educational content on a regular basis.

LEVEL 1

MATHEMATICS EXAMINATION 2

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Notes to Teachers

This is a Digital Publication supplied in both PDF and WORD formats with a school site licence to reproduce for students in both print and electronic formats.

- This examination is based on a syllabus containing topics for Year 7 Mathematics. Some of these topics are: (not all are necessarily included in this examination)

  whole numbers, fractions, decimals, factors, multiples, primes, percentages, working with angles, 2D and 3D shapes, constructions, properties of angles, triangles, quadrilaterals, time, speed, mass, measuring length, area, volume, algebra rules, simplifying expressions, substitution, equations, interpreting graphs, interpreting tables, drawing graphs, Cartesian co-ordinates, Venn diagrams.

- Teachers should examine the questions to judge if they are suitable for their classes

- This is a 1.5 hour examination (total = 80 marks)

- The examination can be shortened if required by removing some of the questions

- A set of detailed answers with a marking scheme is supplied with this examination

- A multiple-choice answer sheet is supplied with this examination

- While every effort has been made to ensure the correctness of each question and answer, there is no guarantee of perfection. Please advise of you believe you have found an error.

Examination 2
LEVEL 1 MATHEMATICS

Reading time: 15 minutes
Total writing time: 1.5 hours

QUESTION AND ANSWER BOOK

Structure of book

Section	Number of questions	Number of questions to be answered	Number of Marks
A	10	10	10
B	7	7	70

Directions to students

Materials
Question and answer book of 21 pages.
Working space is provided throughout the book.
You may use an approved calculator, ruler, protractor, set square and aids for curve sketching.

The Examination.
Ensure that you write your **name** in the space provided on the cover of this book.
Answer **all** questions.
There is a total of 80 marks available for the examination.
The marks for each part of each question are shown.
Unless otherwise indicated, the diagrams in this book are **not** drawn to scale.
Angles in all diagrams are measured in degrees.
All written responses should be in English.

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Question 1

Matches were used to construct the following patterns
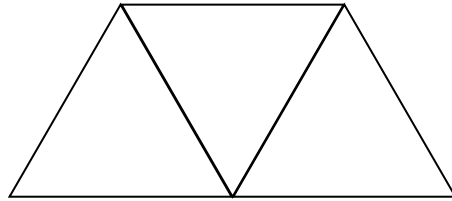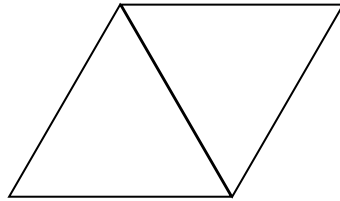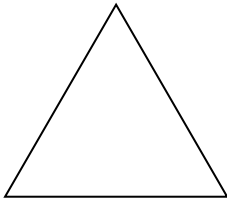
The number of matches needed to construct the **next** shape in this pattern is

A.   9

B.   10

C.   11

D.   12

E.   13

Question 2

Which one of the following equals 1600 metres ?

A.   1.6 km

B.   16 km

C.   16 cm

D.   16 000 cm

E.   16 000 mm

SECTION B consists of seven short answer questions.
Answer each question in the space provided. Show all working.
Write your final answer in the box provided.
Each question is worth 10 marks.

Question 1 (10 marks)

a.   Calculate $2.34 \div 100$.

....

....

....

(1 mark)
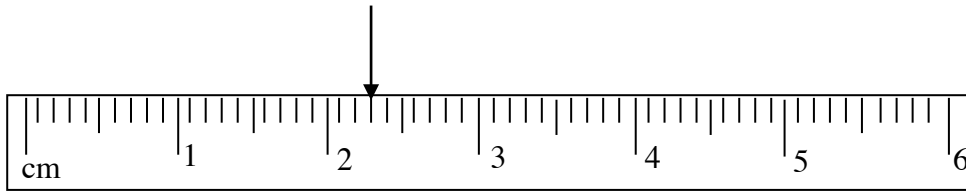
b.   i.   What measurement is the arrow pointing to on the above ruler?
Give your answer in centimetres.

....

(1 mark)

ii.   What would the answer be in millimetres?

....

(1 mark)

LEVEL 1 MATHEMATICS

EXAMINATION 2

ANSWER SHEET

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NAME _____

INSTRUCTIONS

- Write your name in the space provided above.

- Marks will **NOT** be deducted for incorrect answers.

- **NO MARK** will be given if more than **ONE** answer is completed for any question.

- All answers must be completed like **THIS** example.

A	B	C	D	E

SECTION A

1	A	B	C	D	E
2	A	B	C	D	E
3	A	B	C	D	E
4	A	B	C	D	E
5	A	B	C	D	E
6	A	B	C	D	E
7	A	B	C	D	E
8	A	B	C	D	E
9	A	B	C	D	E
10	A	B	C	D	E

1.   **Answer A**

    First shape = 3 matches
    Second shape = 3 + 2 = 5 matches
    Third shape = 5 + 2 = 7 matches
    Fourth shape = 7 + 2 = 9 matches

---

2.   **Answer A**

    1600 m = 1.6 km = 160 000 cm = 1 600 000 mm

---

3.   **Answer C**

$$\frac{7}{9} = \frac{14}{18} = \frac{28}{36}$$

$$\frac{5}{6} = \frac{15}{18} = \frac{30}{36}$$

    A fraction that lies between $\dfrac{28}{36}$ and $\dfrac{30}{36}$ is $\dfrac{29}{36}$

---

4.   **Answer E**

    This prism has 5 faces, 6 vertices and 9 edges.
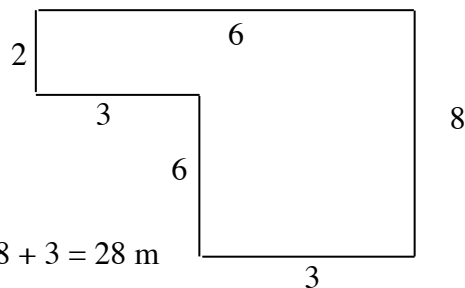
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5.   **Answer C**

$$\frac{7}{10} = 0.7 \qquad \frac{7}{1000} = 0.007$$

    7 + 0.7 + 0.007 = 7.707

---

6.   **Answer D**

$$\frac{4}{5} + \frac{3}{5} = \frac{7}{5} = 1\frac{2}{5} = 1\frac{4}{10} = 1.4$$

---

7.   **Answer C**

    Perimeter = 6 + 3 + 2 + 6 + 8 + 3 = 28 m

Question 1

a.   Move 2 places to the left
$$2.34 \div 100$$
$$= 0.0234 \quad \text{[1 mark]}$$

b. i.   2.3 cm   [1 mark]

b. ii. $2.3 \times 10 = 23$ mm   [1 mark]

c.
$$1\frac{3}{4} \text{ m} = 1.75 \text{ m} \quad \text{[1 mark]}$$
$$65 \text{ cm} = 0.65 \text{ m} \quad \text{[1 mark]}$$
$$\begin{array}{r} 1.75 \\ +0.65 \\ \hline 2.40 \end{array} = 2.4 \text{ m} \quad \text{[1 mark]}$$

d.

0.0708 m = 7.08 cm	78 cm = 78 cm
7800 mm = 780 cm	0.078 m = 7.8 cm
0.078 km = 7800 cm	

Therefore, order from shortest to longest is   0.0708 m , 0.078 m , 78 cm , 7800 mm , 0.078 km

[2 marks – lose $\dfrac{1}{2}$ mark for each one wrong]

e.   Total time for advertisements = $7 \times 3 = 21$ minutes. [1 mark]
         Therefore, length of programme = 1 hr 15 minutes – 21 minutes = 54 minutes. [1 mark]

Question 2

a.   100 minutes [1 mark]

b.   He arrived at the park 30 minutes after leaving home. That is, at 10.30 AM   [1 mark]

c.   6 km [1 mark]

d.   Arrived 30 minutes after leaving home. Left 70 minutes after leaving home. Therefore, at the park for 40 minutes. [1 mark]

e.   Stopped from 80 to 90 minutes. Therefore, 10 minutes. [1 mark]

f.   10.00 AM + 70 minutes = 11.10 AM. [1 mark]

g.   The last 4 km of his journey home took only 10 minutes compared with 20 minutes for the first 4 km. [1 mark]

h.   He had travelled from 6 km away from home to 4 km away from home. Therefore, 2 km from the park. [1 mark]

i.   Melanie's house must be 2 km from his home [1 mark]
         He reaches 2 km from his home when time = 95 minutes. Therefore, 10.00 AM + 95 minutes = 11.35 AM. [1 mark]

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