

# Multiples in Context (F)

A collection of 9-1 Maths GCSE Sample and Specimen questions from AQA, OCR, Pearson-Edexcel and WJEC Eduqas.

Name:	
Total Marks:	

1. Gary's alarm and Ian's alarm both bleep at 7:50 am.

Then Gary's alarm bleeps every 6 minutes and Ian's alarm bleeps every 4 minutes.

What is the next time both alarms bleep together?

Gary: 6, 12 12 minutes after 7:50am.

Ian: 4, 8, 12 10 minutes is 8:00am

8:02 am

..... [4]

2. Diaries are sold in boxes of 12

Pencils are sold in boxes of 10

Rulers are sold in boxes of 6

A teacher wants to buy the same number of diaries, pencils and rulers.

Work out the smallest number of boxes of each item he could buy.

Diaries: 12, 24, 36, 48, 60

Pencils: 10, 20, 30, 40, 50, 60

Rulers: 6, 12, 18, 24, 30, 36, 42, 48, 54, 60

5

boxes of diaries

6

boxes of pencils

10

boxes of rulers

[3]

3. A piano competition takes place every 3 years. A violin competition takes place every 4 years.

Both competitions took place in 2009 2005 2001 1997 1993

a) In which of these years did the violin competition take place? Circle your answer.

1992

1993

1994

1995

[1]

b) When is the next year after 2009 that both competitions will take place?

Piano: 3, 6, 9, 12 12 years later

Violin: 4, 8, 12

$$\begin{array}{r} 2009 \\ + 12 \\ \hline 2021 \end{array}$$

2021

[1]

c) In any leap year, the number made by the last two digits is divisible by 4

For example, 1996 and 2004 were leap years because 96 and 04 are divisible by 4.  
Give a reason why the violin competition will never take place in a leap year.

2009 had a violin competition. 09 is not divisible

[1]

by 4. It then goes up in 4s but this means it

will continue to by 1 more than a multiple of 4.

## **CREDITS AND NOTES**

<b>Question</b>	<b>Awarding Body</b>
1	OCR
2	AQA
3	AQA

### **Notes:**

These questions have been retyped from the original sample/specimen assessment materials and whilst every effort has been made to ensure there are no errors, any that do appear are mine and not the exam board s (similarly any errors I have corrected from the originals are also my corrections and not theirs!).

Please also note that the layout in terms of fonts, answer lines and space given to each question does not reflect the actual papers to save space.

These questions have been collated by me as the basis for a GCSE working party set up by the GLOW maths hub - if you want to get involved please get in touch. The objective is to provide support to fellow teachers and to give you a flavour of how different topics "could" be examined. They should not be used to form a decision as to which board to use. There is no guarantee that a topic will or won't appear in the "live" papers from a specific exam board or that examination of a topic will be as shown in these questions.



### **Links:**

AQA <http://www.aqa.org.uk/subjects/mathematics/gcse/mathematics-8300>

OCR <http://ocr.org.uk/gcsemaths>

Pearson Edexcel <http://qualifications.pearson.com/en/qualifications/edexcel-gcses/mathematics-2015.html>

WJEC Eduqas <http://www.eduqas.co.uk/qualifications/mathematics/gcse/>

### **Contents:**

This version contains questions from:

AQA – Sample Assessment Material, Practice set 1 and Practice set 2

OCR – Sample Assessment Material and Practice set 1

Pearson Edexcel – Sample Assessment Material, Specimen set 1 and Specimen set 2

WJEC Eduqas – Sample Assessment Material