

TOPICAL PAST PAPER QUESTIONS WORKBOOK

IGCSE Mathematics (0580) Paper 1

[Core]

Exam Series: May/June 2012 – Oct/Nov 2022

Format Type B:

Each question is followed by its answer scheme



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Introduction

Each Topical Past Paper Questions Workbook contains a comprehensive collection of hundreds of questions and corresponding answer schemes, presented in worksheet format. The questions are carefully arranged according to their respective chapters and topics, which align with the latest IGCSE or AS/A Level subject content. Here are the key features of these workbooks:

1. The workbook covers a wide range of topics, which are organized according to the latest syllabus content for Cambridge IGCSE or AS/A Level exams.
2. Each topic includes numerous questions, allowing students to practice and reinforce their understanding of key concepts and skills.
3. The questions are accompanied by detailed answer schemes, which provide clear explanations and guidance for students to improve their performance.
4. The workbook's format is user-friendly, with worksheets that are easy to read and navigate.
5. This workbook is an ideal resource for students who want to familiarize themselves with the types of questions that may appear in their exams and to develop their problem-solving and analytical skills.

Overall, Topical Past Paper Questions Workbooks are a valuable tool for students preparing for IGCSE or AS/A Level exams, providing them with the opportunity to practice and refine their knowledge and skills in a structured and comprehensive manner. To provide a clearer description of this book's specifications, here are some key details:

- Title: Cambridge IGCSE Mathematics (0580) Paper 1 Topical Past Paper Questions Workbook
- Subtitle: Exam Practice Worksheets With Answer Scheme
- Examination board: Cambridge Assessment International Education (CAIE)
- Subject code: 0580
- Years covered: May/June 2012 – Oct/Nov 2022
- Paper: 1 (Core)
- Number of pages: 1289
- Number of questions: 1710

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Chapter 1

Numbers

1. 0580_m22_qp_12 Q: 1

Write the number sixteen thousand and thirty-seven in figures.

..... [1]

Answer:

Question	Answer	Marks	Partial Marks
	16037	1	

2. 0580_m22_qp_12 Q: 2

Write down the six factors of 28.

.....,,,,, [2]

Answer:

Question	Answer	Marks	Partial Marks
	1, 2, 4, 7, 14, 28	2	B1 for 5 correct and one error or omission

3. 0580_m22_qp_12 Q: 3

Write 9876 correct to the nearest thousand.

..... [1]

Answer:

Question	Answer	Marks	Partial Marks
	10 000	1	

4. 0580_m22_qp_12 Q: 5

Write down the reciprocal of $\frac{5}{6}$.

..... [1]

Answer:

Question	Answer	Marks	Partial Marks
	1.2 oe	1	

5. 0580_m22_qp_12 Q: 6

This is Edha's method to work out 99×27 without using a calculator.

$$\begin{aligned} 99 \times 27 &= 100 \times 27 - 27 \\ &= 2700 - 27 \\ &= 2673 \end{aligned}$$

Show how to use Edha's method to work out 99×68 without using a calculator.

[2]

Answer:

Question	Answer	Marks	Partial Marks
	$100 \times 68 - 68$ $= 6800 - 68$ $= 6732$	2	M1 for $100 \times 68 - 68$

6. 0580_m22_qp_12 Q: 7

(a) Write 5.26 pm using the 24-hour clock.

..... [1]

(b) A journey starts at 21 15 one day and ends at 04 33 the next day.

Calculate the time taken, in hours and minutes.

..... h min [1]

(c) Change 10 260 seconds into hours.

..... hours [2]

Answer:

Question	Answer	Marks	Partial Marks
(a)	1726	1	
(b)	7 [h] 18 [min]	1	
(c)	2.85	2	M1 for $\frac{10260}{60 \times 60}$ or B1 for 3600 seconds = 1 hour oe soi or 171

7. 0580_m22_qp_12 Q: 9

Put one pair of brackets into this calculation to make it correct.

$$150 - 17 - 5 \times 2^2 = 33$$

[1]

Answer:

Question	Answer	Marks	Partial Marks
	$150 - 17 - (5 \times 2)^2 = 33$	1	

8. 0580_m22_qp_12 Q: 10

Work out $\sqrt{5} \times 6^2$.

Give your answer correct to 2 decimal places.

..... [2]

Answer:

Question	Answer	Marks	Partial Marks
	80.50 cao	2	B1 for 80.498...or 80.5 or correctly rounding <i>their</i> more accurate decimal to 2dp

9. 0580_m22_qp_12 Q: 12

Indrani and Jagad share some money in the ratio Indrani : Jagad = 7 : 9.

Calculate the percentage of the money that Indrani receives.

..... % [2]

Answer:

Question	Answer	Marks	Partial Marks
	43.75	2	M1 for $\frac{7}{7+9}[\times 100]$ If zero scored, SC1 for answer 56.25

10. 0580_m22_qp_12 Q: 15

Write 0.0001 as a power of 10.

..... [1]

Answer:

Question	Answer	Marks	Partial Marks
	10^{-4}	1	

11. 0580_m22_qp_12 Q: 17

Sanjay invests \$700 in an account paying simple interest at a rate of 2.5% per year.

Calculate the value of his investment at the end of 6 years.

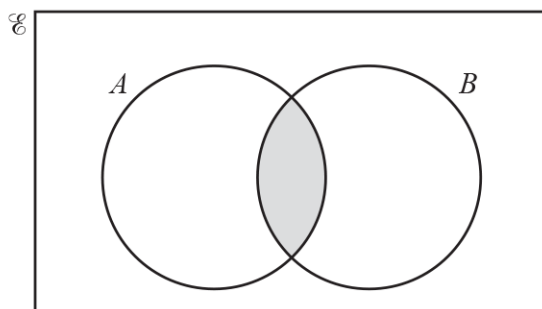
\$ [3]

Answer:

Question	Answer	Marks	Partial Marks
	805	3	B2 for 105 or M2 for $\frac{700 \times 2.5 \times 6}{100} + 700$ oe or M1 for $\frac{700 \times 2.5 [\times 6]}{100}$ oe

12. 0580_m22_qp_12 Q: 21

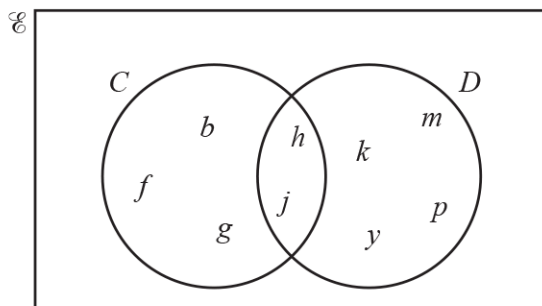
(a)



Use set notation to describe the shaded region.

..... [1]

(b)



Find $n(C)$.

..... [1]

Answer:

Question	Answer	Marks	Partial Marks
(a)	$A \cap B$	1	
(b)	5	1	

13. 0580_m22_qp_12 Q: 22

Without using a calculator, work out $2\frac{1}{3} \times \frac{11}{14}$.

You must show all your working and give your answer as a mixed number in its simplest form.

..... [3]

Answer:

Question	Answer	Marks	Partial Marks
	$\frac{7}{3}$ oe improper fraction	M1	or $\frac{k}{3} \times \frac{11}{14}$ where $k > 3$
	$1\frac{5}{6}$ cao	A2	A1 for $\frac{77}{42}$ or $\frac{11}{6}$ or $1\frac{35}{42}$

14. 0580_m22_qp_12 Q: 24

Udita thinks of two whole numbers.

Both numbers are greater than 6.

The lowest common multiple (LCM) of the two numbers is 90.

The highest common factor (HCF) of the two numbers is 6.

Find the two numbers.

..... and [2]

Answer:

Question	Answer	Marks	Partial Marks
	18 30	2	<p>M1 for 2,3,3,5 or B1 for recognising both numbers are multiples of 6 and greater than 6</p> <p>or for giving two numbers greater than 6 and ≤ 90, satisfying either LCM is 90 or HCF is 6</p>

15. 0580_s22_qp_11 Q: 6

Write these numbers in order, starting with the smallest.

$$\frac{6}{17} \quad 34\% \quad \frac{9}{25} \quad 0.345$$

..... < < < [2]
smallest

Answer:

Question	Answer	Marks	Partial Marks
	34% 0.345 $\frac{6}{17}$ $\frac{9}{25}$	2	M1 for [0].35... [0].34 [0].36 or B1 for three in the correct order

16. 0580_s22_qp_11 Q: 9

Calculate $4^5 - 5^4$.

..... [1]

Answer:

Question	Answer	Marks	Partial Marks
	399	1	

17. 0580_s22_qp_11 Q: 10

Jason starts a run at 10.05 am and finishes at 1.02 pm.

Work out the time Jason takes to complete the run.

..... h min [1]

Answer:

Question	Answer	Marks	Partial Marks
	2 [h] 57 [m]	1	

18. 0580_s22_qp_11 Q: 11

Calculate $\frac{1-0.7}{0.45-0.38}$, giving your answer correct to 4 significant figures.

..... [2]

Answer:

Question	Answer	Marks	Partial Marks
	4.286 cao	2	B1 for 4.285[7...] or 4.29 or $\frac{30}{7}$ or $4\frac{2}{7}$ or for correctly rounding their more accurate decimal to 4sf

19. 0580_s22_qp_11 Q: 12

Kirsty changes \$380.80 into pounds (£) when £1 = \$1.19.

Calculate the amount Kirsty receives.

£ [2]

Answer:

Question	Answer	Marks	Partial Marks
	320	2	M1 for $380.8[0] \div 1.19$ oe

20. 0580_s22_qp_11 Q: 14

Without using a calculator, work out $\frac{3}{7} - \frac{2}{21}$.

You must show all your working and give your answer as a fraction in its simplest form.

..... [2]

Answer:

Question	Answer	Marks	Partial Marks
	$\frac{9}{21}$ and $\frac{2}{21}$ oe	M1	Allow any correct denominator $21k$
	$\frac{1}{3}$ cao and correct working	A1	

21. 0580_s22_qp_11 Q: 19

Lin invests \$16000 at a rate of $r\%$ per year simple interest.
At the end of 5 years, she has a total amount of \$17920.

Find the value of r .

$$r = \dots\dots\dots [3]$$

Answer:

Question	Answer	Marks	Partial Marks
	2.4	3	<p>B2 for 0.024 seen or M2 for oe or better</p> $17920 - 16000 = \frac{r}{100} \times 5 \times 16000$ <p>or $17920 = 16000 \times (1 + 5r)[\times 100]$</p> <p>or M1 for any of these, oe or better</p> $17920 - 16000 \text{ or } \frac{r}{100} \times 5 \times 16000$ <p>or $\frac{\text{their } 1920}{16000} [\times 100]$ or</p> $\frac{17920 [\times 100]}{16000} - 1 [00]$ <p>or $\frac{\text{their } 1920}{5} [\times 100]$ or figs 384</p>