

TOPICAL PAST PAPER QUESTIONS WORKBOOK

Edexcel International GCSE Mathematics B (4MB1) Paper 1

Exam Series: Jan 2017 – Jan 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: Edexcel IGCSE Mathematics B (4MB1) Paper 1 Topical Past Paper Questions Workbook
- Subtitle: Exam Practice Worksheets With Answer Scheme
- Examination board: Pearson Edexcel
- Subject code: 4MB1
- Years covered: Jan 2017 – Jan 2022
- Paper: 1
- Number of pages: 738
- Number of questions: 557

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Chapter 1

Number

1. 4MB0_01R_que_20170109 Q: 2

Express 275 g as a fraction of 5.5 kg.

Give your answer in its simplest form.

(Total for Question 2 is 2 marks)

Answer:

Q	Working	Answer	Mark	Notes
	$\frac{275}{5500}$ OR $\frac{0.275}{5.5}$		2	M1
		$\frac{1}{20}$		A1
				Total 2 marks

Notes: 1. Fraction with both numerator/denominator in grams or kilograms for (M1)

2. Do not accept 0.05 or 5% for (A1) unless you also see $\frac{1}{20}$ as well.

3. Ignore any units given (e.g. g or kg) in the final answer.

2. 4MB0_01R_que_20170109 Q: 4

Each time a music track was downloaded, the music company received £0.95

The music company gave $12\frac{1}{2}\%$ of the money received to the singer of the track.

The music track was downloaded 32 000 times in November.

Calculate how much, in £, was given to the singer by the music company for the November music track downloads.

£

(Total for Question 4 is 2 marks)

Answer:

Question	Working	Answer	Mark	Notes
		$2x - \frac{4}{x^3}$	2	M1 (one term correct)
		OR $2x - 4x^{-3}$		A1 (both terms correct)
				Total 2 marks

3. 4MB0_01R_que_20170109 Q: 9

Showing all your working, evaluate $\frac{3^{-2} + 5^3}{3^{-2}}$

.....
(Total for Question 9 is 2 marks)

Answer:

Question	Working	Answer	Mark	Notes
	$\frac{1}{9} + 125$ $\frac{1}{9}$ or $1 + \frac{125}{9}$		2	M1
		1126		A1
				Total 2 marks

Notes: 1. Accept $\left(\frac{1}{9} + 125\right) \times 9$ or $1 + 5 \times 15^2$ for (M1)

2. Where decimals are used for $1/9$, **must** see 0.11 (or better) written down for (M1).

4. 4MB0_01R_que_20170109 Q: 10

$$t = \frac{2 \cos p^\circ - 1}{\sqrt{q} - r}$$

where $p = 30$, $q = 12288$ and $r = 64$

- (a) Find the exact value of t .
Give your answer as a decimal.

$$t = \dots\dots\dots$$

(2)

- (b) Write your answer to part (a) to 4 significant figures.

$$\dots\dots\dots$$

(1)

(Total for Question 10 is 3 marks)

Answer:

Question	Working	Answer	Mark	Notes
a	$\frac{2 \cos 30 - 1}{\sqrt{12288} - 64}$		2	M1
		0.015625		A1 (Do not accept 1/64)
b		0.01563	1	A1ft (Accept 0.01562)
				Total 3 marks

Notes: 1. Accept a correct standard form format in either part.

2. For the follow through in (b), we must see more than 4 significant figures in part (a).
(Of course, the correct answer seen in part (b) earns the (A1) irrespective of what is seen in part (a).)

5. 4MB0_01R_que_20170109 Q: 18

$$a:b = 5:8 \text{ and } b:c = 6:25$$

Find, in its simplest form, $a:b:c$

$$a:b:c = \dots\dots\dots$$

(Total for Question 18 is 3 marks)

Answer:

Q	Working	Answer	Mark	Notes
	$a : b = 30 : 48$ or $b : c = 48 : 200$		3	M1 Accept equivalent ratios for method
		$a : b : c = 30 : 48 : 200$ $a : b : c = 15 : 24 : 100$		A1 A1
				Total 3 marks

Notes: 1. $\frac{a}{b} = \frac{5 \times 3}{8 \times 3}$ or $\frac{b}{c} = \frac{6 \times 4}{25 \times 4}$ (M1)

$$\frac{a}{b} = \frac{15}{24} \text{ and } \frac{b}{c} = \frac{24}{100} \quad (\text{A1})$$

2. $\frac{6}{25} = \frac{8}{x}$ or $\frac{x}{6} = \frac{5}{8}$ (M1)

$$5:8:\frac{100}{3} \text{ or } \frac{30}{8}:6:25 \quad (\text{A1})$$

3. $a = \frac{5}{8}b$ or $c = \frac{25}{6}b$ (M1)

$$\frac{5}{8}:1:\frac{25}{6} \quad (\text{o.e.}) \quad (\text{A1})$$

4. $\frac{6}{8} \times 5$ (3.75) (M1)

$$3.75 : 6 : 25 \quad (\text{A1})$$

6. 4MB0_01R_que_20170525 Q: 1

(a) Write the number 57864 correct to 3 significant figures.

.....
(1)

(b) Write the number 0.04749 correct to 2 decimal places.

.....
(1)

(Total for Question 1 is 2 marks)

Answer:

Q	Working	Answer	Mark	Notes
(a)		57900	1	B1
(b)		0.05	1	B1
				Total 2 marks

7. 4MB0_01R_que_20170525 Q: 2

Find the value of 20^5

Give your answer in standard form.

.....
(Total for Question 2 is 2 marks)

Answer:

Q	Working	Answer	Mark	Notes
	3200000 or 32×10^5		2	M1
		3.2×10^6		A1
				Total 2 marks

8. 4MB0_01R_que_20170525 Q: 5

At the start of his diet, Julian had a weight of 96 kilograms.
After one month, Julian had a weight of 90 kilograms.

Calculate the percentage decrease in Julian's weight.

.....%

(Total for Question 5 is 3 marks)

Answer:

Q	Working	Answer	Mark	Notes
	$\pm \frac{96-90}{96}$ or $\pm \frac{6}{96}$ or $\frac{90}{96} \times 100$		3	M1
	$\pm \frac{96-90}{96} \times 100$ or $100 - \frac{90}{96} \times 100$			M1 DEP
		$6\frac{1}{4}$ (oe)		A1 6.25, $\frac{25}{4}$
	NB -6.25 score M1M1A0			Total 3 marks

9. 4MB0_01R_que_20170525 Q: 8

Show that $(2 + \sqrt{6})(\sqrt{3} - \sqrt{2}) = \sqrt{2}$

You must show all your working.

(Total for Question 8 is 3 marks)

Answer:

Q	Working	Answer	Mark	Notes
	$2\sqrt{3} - 2\sqrt{2} + \sqrt{6} \times \sqrt{3} - \sqrt{6} \times \sqrt{2}$ or $2\sqrt{3} - 2\sqrt{2} + \sqrt{18} - \sqrt{12}$		3	M1 Correctly expand brackets. Allow one sign error.
	$\sqrt{18} = 3\sqrt{2}$ and $\sqrt{12} = 2\sqrt{3}$ or $\sqrt{6} \times \sqrt{3} = 3\sqrt{2}$ and $\sqrt{6} \times \sqrt{2} = 2\sqrt{3}$			M1 May be embedded within working (DEP)
	$2\sqrt{3} - 2\sqrt{2} + 3\sqrt{2} - 2\sqrt{3}$	$\sqrt{2}$		A1 dep on M2 cso
NB Answers derived from decimal expansions score M0M0A0				Total 3 marks

10. 4MB0_01R_que_20170525 Q: 17

Laurent competed in a triathlon.

The incomplete table gives some information about each of his three stages of the triathlon.

Stage	Distance (km)	Time taken	Average speed (km/h)
Swim	1.5	22 min 30 sec	4
Cycle	40		32
Run	10	37 min 30 sec	16

(a) Calculate, in hours and minutes, the time taken by Laurent to complete the cycle stage.

..... hours minutes
(2)

(b) Calculate, in kilometres per hour, Laurent's overall average speed for all three stages of the triathlon.

Give your answer to 3 significant figures.

..... km/h
(2)

(Total for Question 17 is 4 marks)

Answer:

Q	Working	Answer	Mark	Notes
(a)	$\frac{40}{32}$ or 75 or $\frac{5}{4}$ or $1\frac{1}{4}$ or 1.25		2	M1
		1 hour 15 minutes		A1
(b)	$\frac{1.5+40+10}{22.5+75+37.5} \times 60 = \frac{51.5}{135}$ or $\frac{1.5+40+10}{0.375+1.25+0.625} = \frac{51.5}{2.25}$ (oe)		2	M1 FT 75 or 1.25 from (a)
		22.9		A1 awrt 22.9
Total 4 marks				

11. 4MB0_01R_que_20180525 Q: 1

When it is 9.42 am in London, it is 2.12 pm the same day in Delhi.

It is 10.15 am in Delhi.

Find the time in London.

.....

(Total for Question 1 is 2 marks)

Answer:

Question	Working Answer	Mark	Notes
	Time difference between London and Delhi is + 4hours 30 mins (oe)	2	M1
	OR For Delhi, 10 15 am to 2 12 pm is 3 hours 57 min		A1
	Time in London is 5 45am or 05 45 (cao)		
	NB: 5 45 scores A0		
	SC: 5 45 with no working gains M1		

12. 4MB0_01R_que_20180525 Q: 2

Find the Highest Common Factor (HCF) of 180 and 324

.....

(Total for Question 2 is 2 marks)

Answer:

Question	Working Answer	Mark	Notes
	One of 180 and 324 factored as $180 = 2^2 \times 3^2 \times 5$ OR $180 = 36 \times 5$ OR $180 = 5 \times 3 \times 12$ $324 = 2^2 \times 3^4$ OR $324 = 36 \times 9$ OR $324 = 9 \times 3 \times 12$ OR one correct Factor Tree	2	M1
	HCF = 36		A1

13. 4MB0_01R_que_20180525 Q: 5

Here is a list of 5 numbers

$$\left(\sqrt{2} + 3\right) \quad 2\frac{1}{4} \quad 1.23 \times 10^2 \quad \frac{9\pi}{3\pi} \quad \left(\sqrt{3} \times \sqrt{27}\right)$$

Write down all the numbers in the list that are natural numbers.

(Total for Question 5 is 2 marks)

Answer:

Question	Working Answer	Mark	Notes
	1.23×10^2 (OR 123), $\frac{9\pi}{3\pi}$ (OR $\frac{9}{3}$ or 3), $(\sqrt{3} \times \sqrt{27})$ (OR +9 or $\sqrt{81}$) NB: Deduct marks starting with the second ePEN mark box If one error then B1 B0, if two errors B0 B0	2	B2(-1eeoo)

14. 4MB0_01R_que_20180525 Q: 10

Given that m and n are positive integers, and m is odd, express $\frac{2^{20} + 2^{25}}{2^{-15}}$ in the form $m \times 2^n$

Show your working clearly.

(Total for Question 10 is 2 marks)

Answer:

Question	Working Answer	Mark	Notes
	$(1+2^5) \times 2^n$ (ie odd number \times even number)	2	M1
	33×2^{35} OR $m = 33$ or $1 + 2^5$ and $n = 35$		A1
	NB: No working seen scores M0 A0		

15. 4MB1_01R_que_20180525 Q: 1

Without using a calculator and showing all your working, calculate

$$2\frac{7}{8} \times 1\frac{3}{5}$$

Give your answer as a mixed number in its simplest form.

.....

(Total for Question 1 is 2 marks)

Answer:

Question	Working	Answer	Mark	Notes	Sub-Total	Total
	$\frac{23}{8} \times \frac{8}{5}$		M1	Need to see $\frac{23}{8} \times \frac{8}{5}$ and $\frac{23}{5}$ or $\frac{184}{40}$		
		$4\frac{3}{5}$	A1	NB no marks for an answer without any working. Must be the mixed fraction in its simplest form		2

16. 4MB1_01R_que_20180525 Q: 3

The number of people living in Delhi is 1.7×10^7

The land area of Delhi is 1.5×10^3 square kilometres.

Calculate the average number of people per square kilometre living in Delhi.

Give your answer in standard form to 2 significant figures.

.....
(Total for Question 3 is 2 marks)

Answer:

Question	Working	Answer	Mark	Notes	Sub-Total	Total
	$(1.7 \times 10^7) \div (1.5 \times 10^3)$		M1	for $1.1(3) \times 10^4$ or correct value to 2 or more significant figures. Eg 11333.33... 11000, 11300		
		1.1×10^4	A1	cao 1.1×10^4		2

17. 4MB1_01R_que_20180525 Q: 5

Without using your calculator, and showing all your working,

express $\frac{12}{3-\sqrt{5}}$ in the form $a + b\sqrt{5}$ where a and b are integers.

.....

(Total for Question 5 is 2 marks)

Answer:

Question	Working	Answer	Mark	Notes	Sub-Total	Total
	$\frac{12}{3-\sqrt{5}} \times \frac{3+\sqrt{5}}{3+\sqrt{5}}$ or $12 = 3a + 3b\sqrt{5} - a\sqrt{5} - 5b$ and $3a - 5b = 12, 3b - a = 0$ oe		M1			
	$\frac{36+12\sqrt{5}}{9-5}$ or $4b=12$ or $4a=36$	$9+3\sqrt{5}$	A1	Correct expansion/correct method for solving simultaneous equations with a correct answer and no errors. NB no marks for answer without any working.		2

18. 4MB1_01R_que_20180525 Q: 10

$$X = 2a + b$$

$X = 19.4$ to 1 decimal place.

$a = 2.4$ to 1 decimal place.

Calculate the upper bound for the value of b .

Show your working clearly.

(Total for Question 10 is 3 marks)

Answer:

Question	Working	Answer	Mark	Notes	Sub-Total	Total
	19.45 or 19.35 or 2.35 or 2.45		B1			
	$(b =) 19.45 - 2 \times 2.35$		M1	Or for $UB_1 - 2 \times LB_2$ or $UB_1 = 2 \times LB_2 + b$ where $19.4 < UB_1 \leq 19.5$ & $2.3 \leq LB_2 < 2.4$		
		14.75	A1			3

19. 4MB1_01R_que_20180525 Q: 15

Barry and Carlos share \$120 in the ratio 3 : 2

Barry gives $\frac{1}{5}$ of his share to Mary.

Carlos gives 35% of his share to Mary.

Express the total amount that Barry and Carlos give to Mary as a fraction of the \$120
Give your answer in its simplest form.

.....
(Total for Question 15 is 4 marks)

Answer:

Question	Working	Answer	Mark	Notes	Sub-Total	Total
	$\frac{1}{5} \times \left(\frac{120}{5} \times 3 \right) (=14.4(0))$		M1	or (Barry:) $\frac{3}{5} \times \frac{1}{5} (= \frac{3}{25})$		
	$0.35 \times \left(\frac{120}{5} \times 2 \right) (=16.8(0))$		M1	or (Carlos:) $\frac{35}{100} \times \frac{2}{5} (= \frac{14}{100} = \frac{7}{50})$		
	$\frac{'14.4'+ '16.8'}{120} = \frac{31.2}{120}$		M1	Dep on M2 or for $\frac{3}{25} + \frac{7}{50}$		
		$\frac{13}{50}$ or 0.26	A1			4

20. 4MB1_01R_que_20190110 Q: 1

Express 15 centimetres as a percentage of 3 metres.

%

(Total for Question 1 is 2 marks)

Answer:

Question	Working	Answer	Mark	Notes
	$\frac{15}{300} \times 100$ oe	5	2	M1 A1

21. 4MB1_01R_que_20190110 Q: 5

Without using a calculator and showing all your working, evaluate

$$2\frac{1}{4} \times 2\frac{2}{3}$$

Give your answer in its simplest form.

(Total for Question 5 is 2 marks)

Answer:

Question	Working	Answer	Mark	Notes
	$\frac{9}{4} \times \frac{8}{3}$ or e.g. $\frac{27}{12} \times \frac{32}{12}$	6	2	M1 for correct improper fractions with intention to multiply A1 dep on M1 – M1 only for $\frac{9}{4} \times \frac{8}{3} = 6$

22. 4MB1_01R_que_20190110 Q: 11

A piece of ribbon 9 metres long is cut into 3 parts in the ratios 3 : 5 : 7 by length.

Calculate the length, in metres, of the longest piece.

m

(Total for Question 11 is 3 marks)

Answer:

Question	Working	Answer	Mark	Notes
	$9 \div (3 + 5 + 7)$ (=0.6) or $7 \div (3 + 5 + 7)$ "0.6" \times 7 or "0.4666..." \times 9	4.2	3	M1 M2 for $\frac{7}{15} \times 9$ or M1 for a correct M1 method to find one of the smaller A1 pieces (1.8, 3)

23. 4MB1_01R_que_20190110 Q: 12

(a) Write 9.6×10^{-7} as an ordinary number.

(1)

(b) Calculate $\frac{2.4 \times 10^{199}}{9.6 \times 10^{-7}}$

Give your answer in standard form.

(2)

(Total for Question 12 is 3 marks)

Answer:

Question	Working	Answer	Mark	Notes
(a)		0.000 000 96	1	B1
(b)		2.5×10^{205}	2	M1 for 0.25×10^{206} or 2.5×10^n where $n \neq 205$ A1

24. 4MB1_01R_que_20190110 Q: 13

Without using a calculator and showing all your working, express

$$\sqrt{605} - \sqrt{80}$$

in the form \sqrt{n} where n is an integer.

(Total for Question 13 is 3 marks)

Answer:

Question	Working	Answer	Mark	Notes
	$\sqrt{121 \times 5} - \sqrt{16 \times 5}$ or $605 = 11 \times 11 \times 5$ and $80 = 4 \times 4 \times 5$ or $2 \times 2 \times 2 \times 2 \times 5$ $11\sqrt{5} - 4\sqrt{5} (=7\sqrt{5})$	$\sqrt{245}$	3	M1 M1dep A1dep on first M1 [allow $n = 245$]
	SC B1 $\sqrt{605} - \sqrt{80} = 11\sqrt{5} - 4\sqrt{5} = 7\sqrt{5} = \sqrt{245}$			

25. 4MB1_01R_que_20190522 Q: 1

Find the Lowest Common Multiple (LCM) of 60 and 135
Show your working clearly.

.....

(Total for Question 1 is 2 marks)

Answer:

Question	Working	Answer	Mark	Notes																													
	60, 120, 180, 240, 300, 360, 420, 480, 540, ... 135, 270, 405, 540, ... or $60 = 2 \times 2 \times 3 \times 5$ or $15 \times 2 \times 2$ $135 = 3 \times 3 \times 3 \times 5$ or $15 \times 3 \times 3$ or <table border="1" style="display: inline-table; vertical-align: middle;"> <tr><td>5</td><td>60</td><td>135</td></tr> <tr><td>3</td><td>12</td><td>27</td></tr> <tr><td></td><td>4</td><td>9</td></tr> </table>	5	60	135	3	12	27		4	9	540	2	M1 for a correct list of multiples up to 540 or 60 and 135 written as a correct product of primes - factors may be on ends of trees or in ladder diagrams (so expect to see 3, 3, 3, 4 and 5 or equivalent e.g. 3, 4, 5, 9) or correct factor grid The following is common: <table style="display: inline-table; vertical-align: middle;"> <tr><td>5</td><td> </td><td>60</td><td>135</td></tr> <tr><td>3</td><td> </td><td>12</td><td>27</td></tr> <tr><td>4</td><td> </td><td>4</td><td>9</td></tr> <tr><td>9</td><td> </td><td>1</td><td>9</td></tr> <tr><td></td><td> </td><td>1</td><td>1</td></tr> </table>	5		60	135	3		12	27	4		4	9	9		1	9			1	1
5	60	135																															
3	12	27																															
	4	9																															
5		60	135																														
3		12	27																														
4		4	9																														
9		1	9																														
		1	1																														
		540	2	A1																													
				<i>Total 2 marks</i>																													

26. 4MB1_01R_que_20190522 Q: 7

Without using a calculator and showing all your working, work out

$$2\frac{3}{4} \div \frac{11}{12}$$

Give your answer in its simplest form.

.....

(Total for Question 7 is 2 marks)

Answer:

Question	Working	Answer	Mark	Notes
	$\frac{11}{4} \times \frac{12}{11}$ or $\frac{33}{12} \div \frac{11}{12} = \frac{33}{11}$			M1
	$\frac{132}{44} = 3$ or $\frac{1}{4} \times \frac{12}{1} = \frac{12}{4} = 3$ or $\frac{1}{1} \times \frac{3}{1} = 3$ or (cancelling of 11s and 4 and 12 seen) or $\frac{33}{12} \div \frac{11}{12} = \frac{33}{11} = 3$ or $\frac{11}{4} \times \frac{12}{11} = \frac{12}{4} = 3$	3	2	A1 dependent on all working seen $\frac{11}{4} \times \frac{12}{11} = 3$ or $\frac{33}{12} \times \frac{12}{11} = 3$ is A0 unless explicit cancelling seen
				<i>Total 2 marks</i>

27. 4MB1_01R_que_20190522 Q: 13

A motorbike was bought for £8600

The motorbike depreciated in value by 20% in the first year after it was bought and by 15% in each of the following years.

Find the value of the motorbike exactly 3 years after it was bought.

£

(Total for Question 13 is 3 marks)

Answer:

Question	Working	Answer	Mark	Notes
	$0.2 \times 8600 (=1720)$ or $0.8 \times 8600 (=6880)$			M1 – award M1 only for 5848 (from $8600 \times 0.8 \times 0.85$) M0 for 4300 (reducing by 50%) unless first year explicitly seen (e.g. either 1720 or 6880 seen in calculation)
	$0.85^2 \times "6880"$			M1ft sight of multiplying their '6880' (which cannot be 8600 but allow for say 1720 or a different changed value) by 0.85^2 – so a correct method for years 2 and 3 following on from their possibly incorrect year 1) or M2 for $0.8 \times 0.85^2 \times 8600$
		4970.8(0) or 4971	3	A1 - award M2 only for 4970
				Total 3 marks

28. 4MB1_01R_que_20190522 Q: 20

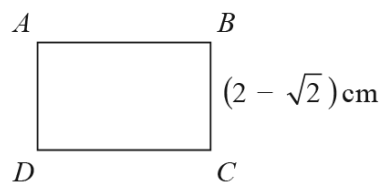


Diagram **NOT**
accurately drawn

The diagram shows rectangle $ABCD$.

$$AD = BC = (2 - \sqrt{2}) \text{ cm}$$

$$\text{Area of } ABCD = 3(5\sqrt{2} - 2) \text{ cm}^2$$

Show that the length of AB can be written in the form $(a + b\sqrt{2}) \text{ cm}$ where a and b are integers to be found.

Show your working clearly.

(Total for Question 20 is 3 marks)

Answer:

Question	Working	Answer	Mark	Notes
	$\frac{3(5\sqrt{2}-2)}{2-\sqrt{2}}$ oe			M1
	$\frac{3(5\sqrt{2}-2)}{2-\sqrt{2}} \times \frac{2+\sqrt{2}}{2+\sqrt{2}}$ oe			M1
		$9 + 12\sqrt{2}$	3	A1 dep on M2
				Total 3 marks

29. 4MB1_01R_que_20201104 Q: 1

Ali, Beth and Chari pay rent on a piece of woodland.
The annual rent that they pay is such that

the amount Ali pays : the amount Beth pays : the amount Chari pays = 13 : 8 : 11

The amount that Chari pays = \$2563

Calculate how much more rent Ali pays than Beth pays.

\$

(Total for Question 1 is 2 marks)

Answer:

Question	Working	Answer	Mark	Notes
	$\frac{2563}{11} \times 13$ and $\frac{2563}{11} \times 8$ or $\frac{2563}{11} \times 5$			M1
		1165	A1	
				Total 2 marks

30. 4MB1_01R_que_20201104 Q: 3

Without using a calculator and showing all your working, evaluate

$$5\frac{1}{3} \div 2\frac{3}{5}$$

Give your answer as a mixed number in its simplest form.

.....

(Total for Question 3 is 3 marks)

Answer:

Question	Working	Answer	Mark	Notes
	$\frac{16}{3}$ and $\frac{13}{5}$ or $\frac{16}{3}$ and $\frac{5}{13}$ oe		M1	
	$\frac{16}{3} \times \frac{5}{13} = \frac{80}{39}$ or e.g. $\frac{80}{15} \div \frac{39}{15} = \frac{80}{39}$ Allow $\frac{16}{3} \div \frac{13}{5} = \frac{80}{39}$		M1	Must multiply both correctly. Or for $\frac{16}{3} \times \dots = \dots$, $\dots \times \frac{5}{13} = \dots$ Note that $\frac{16}{3} \times \frac{5}{13} = 2\frac{2}{39}$ is M1M1A0
		$2\frac{2}{39}$	A1	Must be given as a mixed number
				Total 3 marks

31. 4MB1_01R_que_20201104 Q: 4

Ashley takes 3 hours and 36 minutes to walk around a lake.
The distance she walks is 11 520 m.

Calculate Ashley's average speed.
Give your answer in kilometres per hour.

..... kilometres per hour

(Total for Question 4 is 3 marks)

Answer:

Question	Working	Answer	Mark	Notes
	$\frac{36}{60}$ or 3.6 or $3\frac{36}{60}$ or $3 \times 60 + 36 [=216]$		M1	
	$\frac{11.52}{"3.6"}$ or $\frac{11.52}{"216"} \times 60$		M1	For using distance ÷ time. Allow 11520 instead of 11.52, e.g. $\frac{11520}{"3.6"} \div 1000$
		3.2	A1	
				Total 3 marks

32. 4MB1_01R_que_20201104 Q: 5

Liam started a new job on a salary of \$45 500

At the end of 1 year he is given a pay increase of 5.5%

At the end of each subsequent year he is given a pay increase of 1.25%

Calculate, to the nearest \$, Liam's salary at the end of 3 years after he started the job.

\$

(Total for Question 5 is 3 marks)

Answer:

Question	Working	Answer	Mark	Notes
	$45500 \times 1.055 [= 48002.5]$		M1	
	$"48002.5" \times 1.0125^2$		M1	M2 only if after 49210 working out a third year e.g. 49825.1...
		49 210	A1	Awt (For reference: 49210.06289...)
				Total 3 marks