IGCSE (9-1) Edexcel Past Papers

MATHEMATICS A

Paper 1F, 1FR

2020 — 2025

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1 - (4MA1/1F_Summer_2020_Q1) - *Numbers And The Number System*

The table gives information about the amount of crude oil, in barrels, produced per day by each of six countries in 2015

Country	Crude oil produced per day (number of barrels)
Australia	322 300
Congo	269 000
Gabon	213 300
South Sudan	220 000
Thailand	248 200
Vietnam	333 400

(a) Write down the name of the country that produced the least number of barrels of crude oil.

.....

(1)

(b) Work out the difference between the number of barrels of crude oil produced by Vietnam and the number of barrels of crude oil produced by Australia.

..... barrels

(1)

Thailand produced 248 200 barrels of crude oil.

(c) Write 248 200 correct to the nearest thousand.

.....

(1)

2 - (4MA1/1F_Summer_2020_Q5) - *Numbers And The Number System*

Matt buys a notebook and some pencils.

The notebook costs $2.35
Each pencil costs $0.74

Matt has a total of $20 to spend on the notebook and the pencils.
He buys the greatest number of pencils that he can.

Work out how many pencils he buys.

.....

3 marks

3 - (4MA1/1F_Summer_2020_Q6) - *Numbers And The Number System*

(a) Write $\frac{24}{40}$ as a fraction in its simplest form.

.....

(2)

(b) Write $\frac{1}{5}$ as a decimal.

.....

(1)

There are only blue bricks and white bricks in a box.
The ratio of the number of blue bricks to the number of white bricks is 3 : 7

(c) What fraction of the bricks in the box are blue bricks?

.....

(1)

(d) Show that $\frac{3}{8} + \frac{1}{24} = \frac{5}{12}$

(2)

There are 280 counters in a bag.

$\frac{1}{2}$ of the counters are red.

$\frac{2}{5}$ of the counters are yellow.

The rest of the counters are green.

(e) Work out the number of green counters in the bag.

.....

(3)

4 – (4MA1/1F_Summer_2020_Q10) – *Numbers And The Number System*

(a) Use your calculator to work out the value of $\frac{67.8 + 4.6^2}{\sqrt{56}}$

Write down all the figures on your calculator display.

.....

(2)

(b) Give your answer to part (a) correct to 2 significant figures.

.....

(1)

5 - (4MA1/1F_Summer_2020_Q12) - *Numbers And The Number System*

Gavin bought 3 pairs of jeans in the USA.
He paid a **total** of $72

Gavin sold the 3 pairs of jeans in England.
He sold each pair of jeans for £34.50

£1 = $1.34

Work out Gavin's percentage profit.
Give your answer correct to the nearest whole number.

.....%

4 marks

ANSWERS

1 – (4MA1/1F_Summer_2020_Q1) – *Numbers And The Number System*

(a)		Gabon	1	B1	
(b)		11 100	1	B1	accept −11 100
(c)		248 000	1	B1	
					Total 3 marks

2 – (4MA1/1F_Summer_2020_Q5) – *Numbers And The Number System*

20 – 2.35 (=17.65)		3	M1	
'17.65' ÷ 0.74 (= 23.8…) **or** 24			M1	A clear attempt to subtract 0.74 23 times
	23		A1	
				Total 3 marks

3 – (4MA1/1F_Summer_2020_Q6) – *Numbers And The Number System*

(a)	E.g. $\frac{6}{10}, \frac{9}{15}, \frac{12}{20}, \frac{15}{25}, \frac{18}{30}, \frac{21}{35}$		2	M1	for any fraction equivalent to $\frac{24}{40}$ with denominator less than 40
		$\frac{3}{5}$		A1	
(b)		0.2	1	B1	
(c)		$\frac{3}{10}$ oe	1	B1	
(d)	$\frac{9n}{24n}+\frac{1n}{24n}$ or $\frac{9n+1n}{24n}$		2	M1	for correct fractions with a common denominator (multiple of 24)
	eg $\frac{10}{24}=\frac{5}{12}$	Shown		A1	for a multiple of $\frac{10n}{24n}=\frac{5}{12}$
(e)	$\frac{1}{2}\times 280$ (= 140) oe **or** $\frac{2}{5}\times 280$ (= 112) oe		3	M1	
	280 – '140' – '112'			M1	
		28		A1	
	Alternative method				
	$\frac{1}{2}+\frac{2}{5}\left(=\frac{9}{10}\right)$ or 0.5 + 0.4 (= 0.9) oe		3	M1	
	$\left(1-'\frac{9}{10}'\right)\times 280$ or (1 – '0.9') × 280 oe			M1	
		28		A1	
					Total 9 marks

4 – (4MA1/1F_Summer_2020_Q10) – *Numbers And The Number System*

(a)	$\frac{88.96}{7.48...}$		2	M1	for 88.96 **or** 7.48…**or** for an answer of 11.9 or better
		11.88778…		A1	11.88778(004)
(b)		12	1	B1	ft provided (a) has at least 3 sig figs
					Total 3 marks

5 – (4MA1/1F_Summer_2020_Q12) – *Numbers And The Number System*

E.g. $(72 \div 3) \times 1.34$ (= 17.91) **or** 34.5×1.34 (= 46.23) **or** $72 \div 1.34$ (= 53.73) **or** $(34.5 \times 3) \times 1.34$ (= 138.69)		4	M1	for converting £ to $ or $ to £
'34.5 – '17.91' (= 16.59) **or** '46.23' – (72 ÷ 3) = (22.23) **or** (34.5×3) – '53.73' (= 49.77) **or** '138.69' – 72 (= 66.69)			M1	for profit of 1 pair of jeans or 3 pairs of jeans
$\frac{'16.59'}{'17.91'} \times 100$ **or** $\frac{'22.23'}{72 \div 3} \times 100$ **or** $\frac{'49.77'}{'53.73'} \times 100$ **or** $\frac{'66.69'}{72} \times 100$			M1	for a complete method
	93		A1	for 92.625 – 93
				Total 4 marks

6 – (4MA1/1F_Summer_2020_Q18) – *Numbers And The Number System*

(a)		0.0057	1	B1
(b)		8×10^5	1	B1
(c)	$\frac{273000}{6 \times 10^{-2}}$		2	M1 for 273 000 **or** digits 455
		4 550 000		A1 for 4 550 000 or 4.55×10^6 oe
				Total 4 marks

7 – (4MA1/1F_Summer_2020_Q19) – *Numbers And The Number System*

$100 \div 28\,440$ (= 0.0035…) **or** $28\,440 \div (60 \times 60)$ (= 7.9)		3	M1	
'0.0035...' × 60 × 60 **or** 100 ÷ '7.9'			M1	
	13		A1	for 12.65 – 13
				Total 3 marks

8 – (4MA1/1F_Summer_2020_Q22) – *Numbers And The Number System*

E.g. 1 − 0.2 (= 0.8) **or** 100(%) − 20(%) (= 80(%)) **or** $\frac{1080}{80}$ (= 13.5) oe		3	M1	
E.g. 1080 ÷ 0.8 or 1080 ÷ 80 × 100 or '13.5' × 100 1080 × 100 ÷ 80			M1	for a complete method
	1350		A1	
				Total 3 marks

9 – (4MA1/1F_Summer_2020_Q23) – *Numbers And The Number System*

(a)		2×3^{37}	1	B1
(b)	$2 \times 3^{43} \times 2^4 \times 3^{37}$ **or** $2^5 \times 3^p$ ($p \neq 80$) **or** $2^q \times 3^{80}$ ($q \neq 5$)		2	M1
		$2^5 \times 3^{80}$		A1
				Total 3 marks