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4MA1 June 2027 Paper 1F Best Guess Paper

Foundation · Target Grade 5 · Mark Scheme

Disclaimer

This independently compiled practice paper is for students preparing for Pearson Edexcel International GCSE Mathematics A (4MA1), Foundation Tier, Paper 1F. A calculator may be used.

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Revise the full specification. Attempt the matching question paper before using the mark scheme, model answers and practice resources at www.mygrade9mathstutor.com.

M: method; A: accuracy; B: independent. Accept equivalent valid methods. Accuracy marks require the related method; follow-through applies only where stated. Check the requested units and rounding. Proofs and questions that ask for reasons or algebra must be supported by working.

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Mark Scheme

M: method · A: accuracy · B: independent

Accept equivalent valid methods.

Give credit for the required working.

Calculator allowed · 29 questions · 100 marks · Suggested time: 2 hours.

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Question 1 · Place value and rounding · 4 marks

Part	Answer	Marks	Marking guidance
(a)	Forty-seven thousand and eighty-two	1	B1: Correct number in words; accept omission of “and”.
(b)	0.049, 0.4, 0.405, 0.415, 0.45	1	B1: Correct answer.
(c)	6400	1	B1: Correct answer.
(d)	17.9	1	B1: Correct answer.

Question 2 · Multiples, factors, squares and cubes · 4 marks

Part	Answer	Marks	Marking guidance
(a)	32	1	B1: Correct answer.
(b)	12 (also 6 or 9)	1	B1: Any one of 6, 9 or 12.
(c)	49 (also 9)	1	B1: Either 9 or 49.
(d)	27	1	B1: Correct answer.

Question 3 · Two-way tables and probability · 4 marks

Part	Answer	Marks	Marking guidance
(a)	Boys: 12 football, 6 tennis. Girls: 5 rugby, 28 total. Football total: 23.	3	B1: At least two missing entries correct. B1: At least four missing entries correct. B1: All five missing entries correct.
(b)	$\frac{1}{5}$	1	B1: Accept an equivalent fraction, 0.2 or 20%.

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Question 4 · Units and elapsed time · 3 marks

Part	Answer	Marks	Marking guidance
(a)	340 cm	1	B1: Correct answer.
(b)	2.65 kg	1	B1: Correct answer.
(c)	1 hour 17 minutes	1	B1: Correct answer.

Question 5 · Simplifying and substitution · 4 marks

Part	Answer	Marks	Marking guidance
(a)	$3a + 10b$	2	B1: Correct $3a$ term. B1: Correct $10b$ term, with no extra terms for both marks.
(b)	$T = 30$	2	M1: Correct substitution, including -2. A1: 30.

Question 6 · Range and median · 3 marks

Part	Answer	Marks	Marking guidance
(a)	2.6 kg	1	B1: Correct answer.
(b)	5.4 kg	2	M1: Order the masses or show a valid method to locate the middle value. A1: 5.4.

Question 7 · Angles in an isosceles triangle · 3 marks

Part	Answer	Marks	Marking guidance
7	112°	3	B1: Equal base angles with isosceles reason. M1: Use the 180° triangle sum to find a base angle, with reason. A1: 112° with straight-line reason, or equivalent justified exterior-angle method.

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Question 8 · Percentage discount · 4 marks

Part	Answer	Marks	Marking guidance
8	£10.67	4	M1: Multiply each price by its quantity. A1: £12.55 before discount. M1: Apply the 85% multiplier or subtract 15% of the total. A1: £10.67.

Question 9 · Simplifying and sharing ratios · 4 marks

Part	Answer	Marks	Marking guidance
(a)	2 : 3	1	B1: Correct answer.
(b)	£40	3	M1: Find 9 total parts. M1: Divide £360 by 9 and use the one-part difference, or subtract the shares. A1: £40.

Question 10 · Area of a trapezium · 3 marks

Part	Answer	Marks	Marking guidance
10	8 cm	3	M1: Substitute into the trapezium area formula. M1: Rearrange to $h = 72 \div 9$. A1: 8.

Question 11 · Laws of indices · 3 marks

Part	Answer	Marks	Marking guidance
(a)	p^{10}	1	B1: Correct answer.
(b)	$27q^3$	1	B1: Correct answer.
(c)	r^{-5}	1	B1: Correct single power of r.

Question 12 · Changing the subject · 2 marks

Part	Answer	Marks	Marking guidance
12	$r = \frac{v + h}{k}$	2	M1: Add h to both sides or divide all terms by k first. A1: Correct rearrangement; accept equivalent forms.

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Question 13 · Prime factorisation · 2 marks

Part	Answer	Marks	Marking guidance
13	$2 \times 2 \times 31$	2	M1: Correct factor pair with a prime factor, or equivalent valid factor tree. A1: $2 \times 2 \times 31$ or $2^2 \times 31$.

Question 14 · Multiplying mixed numbers · 3 marks

Part	Answer	Marks	Marking guidance
14	$8\frac{2}{5}$ shown	3	M1: Convert both to improper fractions. M1: Multiply numerators and denominators correctly, with or without cancellation. A1: Derive the stated mixed number from correct working.

Question 15 · Probability and ratio · 3 marks

Part	Answer	Marks	Marking guidance
15	18 blue counters	3	M1: Use $54 \div 0.45$ to find the total, or equivalent scaling. M1: Use the complementary probability and the fraction $\frac{3}{8}$ to find the blue share. A1: 18.

Question 16 · Upper and lower bounds · 2 marks

Part	Answer	Marks	Marking guidance
(a)	1.65 m	1	B1: Correct answer.
(b)	1.55 m	1	B1: Correct answer.

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Question 17 · Expanding, factorising and inequalities · 6 marks

Part	Answer	Marks	Marking guidance
(a)	$4x - 23$	2	M1: Expand both brackets correctly. A1: $4x - 23$.
(b)	$6ab(3a - 2b)$	2	M1: Factor out a nontrivial common factor with correct terms inside. A1: Fully factorised.
(c)	$y > 5$	2	M1: Rearrange to $3y > 15$ or equivalent. A1: $y > 5$.

Question 18 · Venn diagrams and probability · 4 marks

Part	Answer	Marks	Marking guidance
(a)	A only: 2, 5, 7, 11. Both: 3. B only: 6, 9, 12. Outside: 1, 4, 8, 10.	3	B1: Exactly 3 in the overlap. B1: Both exclusive regions correct. B1: All four regions correct, no omissions or duplicates.
(b)	$\frac{2}{3}$	1	B1: Accept $\frac{8}{12}$ or any equivalent exact probability.

Question 19 · Arithmetic sequences · 4 marks

Part	Answer	Marks	Marking guidance
(a)	$4n + 3$	2	M1: Identify the common difference of 4 and use $4n$ or equivalent. A1: $4n + 3$ or equivalent.
(b)	87 is the 21st term	2	M1: Solve $4n + 3 = 87$, or use the common difference to locate 87. A1: Show 87 occurs at an integer position, e.g. verify the 21st term.

Question 20 · Grouped frequency tables · 4 marks

Part	Answer	Marks	Marking guidance
(a)	$20 < h \leq 30$	1	B1: Correct answer.
(b)	29 cm	3	M1: Use the four class midpoints. M1: Sum midpoint $\times$ frequency and divide by 40. A1: 29.

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Question 21 · Linear equation with a fraction · 4 marks

Part	Answer	Marks	Marking guidance
21	$x = -\frac{6}{5}$	4	M1: Multiply both sides by 4. M1: Expand to give $12x + 4$ on the right. M1: Collect terms and isolate x by division. A1: $-\frac{6}{5}$ or -1.2, supported by algebra.

Question 22 · Rotation and translation · 4 marks

Part	Answer	Marks	Marking guidance
(a)	90° clockwise rotation about $(-2, 3)$	3	B1: Rotation. B1: 90° clockwise or 270° anticlockwise. B1: Centre $(-2, 3)$.
(b)	C: $(-2, 4)$, $(-1, 4)$, $(-2, 2)$	1	B1: Correct triangle drawn at all three vertices and labelled C.

Question 23 · Converting speed units · 2 marks

Part	Answer	Marks	Marking guidance
23	25 m/s	2	M1: Use both unit conversions in a valid calculation. A1: 25.

Question 24 · Ratio and mass · 4 marks

Part	Answer	Marks	Marking guidance
24	No; 17.7 kg is needed	4	M1: Use 12 ratio parts to find the number of bags per part. A1: 105 small and 75 large bags. M1: Calculate the total mass from the two groups. A1: Correct total and consistent comparison with 17 kg.

Question 25 · Total surface area of a cylinder · 4 marks

Part	Answer	Marks	Marking guidance
25	591 cm^2	4	M1: Find the height using the volume formula, or eliminate it algebraically. M1: Use $2\pi rh$ for the curved surface. M1: Add the areas of both circular ends. A1: 591.

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Question 26 · Area of a semicircular path · 3 marks

Part	Answer	Marks	Marking guidance
26	10π m^2	3	M1: Obtain radii 6 and 4. M1: Subtract the areas of the two semicircles. A1: 10π.

Question 27 · Equation of a straight line · 3 marks

Part	Answer	Marks	Marking guidance
27	$y = 3x - 1$	3	M1: Calculate gradient as change in y ÷ change in x. M1: Substitute a point to find the intercept. A1: Correct equation in the required form.

Question 28 · Simultaneous equations · 3 marks

Part	Answer	Marks	Marking guidance
28	$x = 4$, $y = 1$	3	M1: Correct elimination or substitution to obtain one equation in one unknown. A1: One correct value, supported by algebra. A1: Both correct values, supported by algebra.

Question 29 · Similar triangles and sightlines · 4 marks

Part	Answer	Marks	Marking guidance
29	14 925 m	4	M1: Find both rises above eye level. M1: Use the equal rise-to-run ratios to obtain Katie's distance to the mountain. M1: Subtract 15 m from Katie's distance, or directly use the rise from tree top to mountain top. A1: 14 925.