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4MA1 Nov 2026 Paper 2 Best Guess Paper

Markscheme

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This paper has been created based on topics from previous years and careful analysis of what topics are highly likely to appear in paper 2H. The paper should be excellent at helping students revise for exams. This paper is specifically targeted at students aiming for a Grade 5, so it intentionally avoids some of the grade 7 to 9 real exam paper. The topics from this paper may well appear in the real exams, however there is absolutely no guarantee of this. There are deliberately more questions at a higher grade than you would expect.
Despite what you might see on social media it is not possible to "predict" the paper perfectly. This is usually what people say when they are selling you something...

The best way to prepare for the exams is to revise all topics
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The Playlist for Solutions can be found

The best way to work with this paper is work though it all, watch the Clip. If you get the question incorrect watch the clip again and then try the similar questions from the worksheets

Paper 2H · Grade 5 · Mark Scheme

4MA1 Best Guess · November 2026 · 25 questions · 100 marks
M: method mark · A: accuracy mark · B: independent mark
cao: correct answer only · oe: or equivalent · awrt: answer which rounds to · ft: follow-through · dep: dependent

Question 1

Part	Working	Answer	Mark	Notes
(a)	$3x > 15$ or $x > \frac{10+5}{3}$		M1	for an intention to isolate $3x$ or divide by 3
		$x > 5$	A1	cao (accept $x \geq 6$ if integer context assumed, but $x > 5$ is standard)
(b)		Open circle at 5, arrow right	B1	for an open circle at 5 with a line/arrow pointing to the right

Question 2

Part	Working	Answer	Mark	Notes
	$78 \times 100 = 7800$		M1	for converting metres to centimetres
	$7800 \div 200$ or $78 \div 2$		M1	for dividing by the scale factor of 200
		39	A1	cao

Question 3

Part	Working	Answer	Mark	Notes
	$\frac{10+q}{2} = 11 \implies q = 12$		B1	for $q = 12$
	Mode $= 19 \implies r = 19$		B1	for $r = 19$
	Range $= 19 - p = 16 \implies p = 3$	$p = 3, q = 12, r = 19$	B1	for $p = 3$

Question 4

Part	Working	Answer	Mark	Notes
(a)		$32p^{15}$	B2	for $32p^{15}$ (B1 for $32p^{k}$ or kp^{15})
(b)	$8p^2 - 6p - p^2 + 4p$		M1	for expanding brackets to get at least 3 correct terms
		$7p^2 - 2p$	A1	cao
(c)	$4c = t - d$		M1	for isolating the $4c$ term
		$c = \frac{t-d}{4}$	A1	oe

Question 5

Part	Working	Answer	Mark	Notes
	$5x - 1 = 3x + 5 \implies 2x = 6$		M1	for equating opposite sides
	$x = 3$		M1	for finding $x = 3$
	$\text{Height} = 5(3) - 1 = 14$		M1	for substituting x into either expression to find the width/height
	$\text{Area} = 14 \times 24$	336	A1	cao

Question 6

Part	Working	Answer	Mark	Notes
	$720 \div (7 + 3 + 2) = 60$		M1	for finding the value of one ratio share (60)
	T: 420, C: 180, D: 120		M1	for finding the total of at least one flower type
	Yellow T $= 0.4 \times 420 = 168$ Yellow C $= \frac{2}{3} \times 180 = 120$ Yellow D $= \frac{3}{4} \times 120 = 90$		M1	for finding the yellow count of at least one flower type
	$168 + 120 + 90$		M1	(dep on previous M1) for summing their three yellow values
		378	A1	cao

Question 7

Part	Working	Answer	Mark	Notes
	$600 - 432 = 168$		M1	for finding the absolute difference
	$\frac{168}{600} \times 100$ oe		M1	for complete method to find percentage decrease
		28	A1	cao

Question 8

Part	Working	Answer	Mark	Notes
(a)		Correct triangle	B2	for correctly rotated triangle at $(-1, 3), (-1, 5), (-2, 3)$ (B1 for correct orientation but wrong position)
(b)		Correct triangle	B3	for correctly enlarged triangle at $(-1, 1), (5, 1), (-1, 4)$ (B2 for 2 correct vertices, B1 for correct size but wrong position)

Question 9

Part	Working	Answer	Mark	Notes
(a)(i)		$11, 13, 14, 15, 16$	B1	for all 5 numbers (any order)
(a)(ii)		$10, 11, 12, 13, 14, 15, 16, 17, 19$	B1	for all 9 numbers (any order)
(b)		Yes, with reason	B1	for 'Yes' and stating sets P and R do not overlap / share elements
(c)	Total elements $= 10$ Elements outside $Q = 5$		M1	for identifying 5 elements outside Q or total of 10 elements
		$\frac{1}{2}$	A1	for $\frac{5}{10}$ or $\frac{1}{2}$ oe

Question 10

Part	Working	Answer	Mark	Notes
	$100\% - 20\% = 80\%$ $0.8x = 344$		M1	for recognizing $£344$ represents 80% oe
	$x = 344 \div 0.8$	430	A1	cao

Question 11

Part	Working	Answer	Mark	Notes
	$\sqrt{15^2 - 9^2} = \sqrt{144} = 12$		**M1**	for applying Pythagoras' Theorem to top triangle
			A1	for finding the shared side is 12
	$\sin(40°) = \frac{12}{x} \implies x = \frac{12}{\sin(40°)}$		**M1**	for setting up correct trigonometric ratio
		18.7	**A1**	for 18.7 (accept $18.6 - 18.7$)

Question 12

Part	Working	Answer	Mark	Notes
(a)		Straight line	**B2**	for correct solid line drawn for x from 2 to 3
(b)	Draw lines $x = 0$ and $y = -1$		**M1**	for drawing bounding lines $x = 0$ and $y = -1$
		Region R shaded	**A2**	for correctly shaded triangular region (A1 for region satisfying 2 of 3 inequalities)

Question 13

Part	Working	Answer	Mark	Notes
(a)		0	**B1**	cao
(b)	$\frac{3^3}{3^8} = 3^{3-8}$		**M1**	for expressing 27 as 3^3
		-5	**A1**	cao
(c)	$7^{-12} \times 7^5 = 7^{-7}$		**M1**	for applying power of a power rule to get 7^{-12}
		-7	**A1**	cao

Question 14

Part	Working	Answer	Mark	Notes
	Int angle $= \frac{9\times180}{11} = 147.27...^\circ$		M1	for calculating one interior angle
	Trapezium BCDE sum $= 360^\circ$		M1	for recognising BCDE is an isosceles trapezium (angles sum to 360°)
	$\angle DEB = \frac{360-2(147.27)}{2} = 32.72...^\circ$		M1	for a complete method to find $\angle DEB$
	$\angle BEF = 147.27... - 32.72...$	114.5	A1	for 114.5 (awrt)

Question 15

Part	Working	Answer	Mark	Notes
(a)		Correct Tree	B2	for all probabilities correct on branches (B1 for 2 correct)
(b)	(0.35×0.8) OR (0.65×0.1)		M1	for calculating one correct pathway
	$0.28 + 0.065$		M1	for summing the two correct pathways
		0.345	A1	cao

Question 16

Part	Working	Answer	Mark	Notes
	Area large $= \frac{1}{2}\pi(5^2) = 12.5\pi$		M1	for finding area of large semicircle
	Area small $= \frac{1}{2}\pi(3^2) = 4.5\pi$		M1	for finding area of small semicircle
	Total Area $= 12.5\pi - 4.5\pi = 8\pi$		M1	(dep) for subtracting to find patio area
	Cost $= 8\pi \times 24 \approx 603.19$		M1	for multiplying their area by 24
		Yes, with proof	A1	for "Yes" with correct cost value ($\approx$ £603) supporting conclusion

Question 17

Part	Working	Answer	Mark	Notes
	Volume $= \frac{4}{3}\pi(2.4^3) = 57.9058...$		M1	for calculating the volume of the sphere
	Density $= \frac{385}{57.9058...}$		M1	for substituting into Density $=$ Mass $\div$ Volume
		6.65	A1	awrt 6.65

Question 18

Part	Working	Answer	Mark	Notes
	$x = \frac{-(-6)\pm\sqrt{(-6)^2-4(5)(-3)}}{2(5)}$		M1	for correct substitution into quadratic formula
	$x = \frac{6\pm\sqrt{36+60}}{10}$		M1	for simplifying discriminant to 96
		$1.58, -0.380$	A1	for both values correct to 3 s.f.

Question 19

Part	Working	Answer	Mark	Notes
	LQ $= 8$, UQ $= 20$		M1	for identifying UQ (20) and LQ (8) from ordered list
	$20 - 8$	12	A1	cao

Question 20

Part	Working	Answer	Mark	Notes
(a)	$y = \frac{3x-5}{2} \implies 2y = 3x - 5$		M1	for setting $y = f(x)$ and correctly isolating the x term
		$\frac{2x+5}{3}$	A1	oe
(b)	$f(3) = \frac{9-5}{2} = 2$		M1	for calculating inner function $f(3) = 2$
	$g(2) = 2(2^2) + 1 = 9$	9	A1	cao

Question 21

Part	Working	Answer	Mark	Notes
(a)		$-1, 1, 3$	B2	for all 3 correct (B1 for 1 or 2 correct)
(b)		Smooth curve	B2	for smooth curve plotted through all correct points
(c)	$x^3 - 3x - 1 = 0 \implies x^3 - 3x + 1 = 2$ Draw line $y = 2$		M1	for rearranging to find equation of line to draw $(y = 2)$
		$-1.5, -0.4, 1.9$	A1	for all three values ± 0.1

Question 22

Part	Working	Answer	Mark	Notes
	$3y = 2x + 12 \implies y = \frac{2}{3}x + 4$		M1	for rearranging L_1 to find gradient $m = \frac{2}{3}$
	Passes through $(0, 5) \implies c = 5$		M1	for using $m = \frac{2}{3}$ and y- intercept $= 5$
		$y = \frac{2}{3}x + 5$	A1	oe

Question 23

Part	Working	Answer	Mark	Notes
	Frequencies: $10, 40, 75, 60$. Total $= 185$		M1	for calculating the total frequency (185)
	25 to 50 weight $= (5 \times 2) + 75 + (5 \times 4)$		M1	for setting up calculation for sub-intervals
	Target frequency $= 105$		M1	for finding correct target frequency (105)
		$\frac{21}{37}$	A1	for $\frac{105}{185}$ or $\frac{21}{37}$ oe

Question 24

Part	Working	Answer	Mark	Notes
	$\text{ASF} = \frac{80\pi}{45\pi} = \frac{16}{9}$		M1	for finding Area Scale Factor
	$\text{LSF} = \sqrt{\frac{16}{9}} = \frac{4}{3}$		M1	for finding Linear Scale Factor
	$\text{VSF} = \left(\frac{4}{3}\right)^3 = \frac{64}{27}$		M1	for finding Volume Scale Factor and multiplying by 810
		1920	A1	cao

Question 25

Part	Working	Answer	Mark	Notes
(a)	$2(x^2 - 6x) + 23$		M1	for factorising 2 out of the x terms
	$2[(x - 3)^2 - 9] + 23$		M1	for completing the square inside the bracket
		$2(x - 3)^2 + 5$	A1	cao
(b)		$(3, 5)$	B1	ft from their form in part (a)