

Year 10 into 11 Bridging Project Foundation Answers

Paper 1MA1: 2F				
Question	Working	Answer	Mark	Notes
1 (a)		$3p$	B1	cao
(b)		$2m^3$	B1	cao
(c)		$10 - 4c + 6d$	M1 A1	for $-4c$ or $6d$ (accept $+4c$) for $10 - 4c + 6d$
2		60	B1	cao
3 (a)		Walk	B1	cao
(b)		7 on chart	B1	for bar of height 7 drawn for girls walking
(c)		4	B1	cao
(d)		96	M1 A1	for method to find number of Year 6 students in the survey e.g. $5 + 9 + 6 + 4 + 9 + 7 + 4 + 1 + 2 + 1$ (= 48) or $14 + 10 + 16 + 5 + 3$ (= 48) for 96 or ft from (b), eg 82 if no bar in (b)
4		$\frac{11}{30}, \frac{2}{5}, \frac{7}{15}, \frac{1}{2}$	M1 A1	converts fractions to a common form, e.g. fractions with a denominator of 30, decimals or percentages, at least two conversions correct or any 3 fractions in correct order correct order

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Question	Working	Answer	Mark	Notes
5		(a) Monday wrong	C1	for seeing difference in tally marks and frequency for Monday
		(b) Comment	C1	for suitable comment, eg extra picture for Tuesday needed or explains that 0.5 of a CD is not possible
6		268.20	P1	for a process to work out the value of the £1 coins, eg. $495 \div 3 (= 165)$ or $495 \times 0.33\dots$ or of the 50p coins, eg. $124 \div 2 (= 62)$
			P1	for process to find the number of 20p coins, eg. $(495 - 124 - ("165")) (= 206)$
			P1	for complete process to find total value using consistent units., eg. $(("165") + (124 \div 2) + ("206" \times 0.2))$ or $165 + 62 + 41.2$
			A1	cao (accept 268.2)
7		0.985	B1	oe
8		(a) 25	B1	for 25 (accept 5^2)
		(b) 24	B1	cao
		(c) 23, 29	B1	for 23 and 29 and no extras
9		54	M1	for method to form equation, eg $90 + 2x + 3x = 360$ or for $360 - 90 (= 270)$
			M1	for $5x = 360 - 90$ or for $2x + 3x = 360 - 90$ or for $2x = 108$ or for $3x = 162$ or for $270 \div 5$
			A1	cao

Paper 1MA1: 2F

Question	Working	Answer	Mark	Notes
10		Letters2send (supported)	P1 P1 P1 C1 OR P1 P1 P1 C1	for the start of a process to find comparable costs at either shop, e.g. $150 \div 25 (= 6)$ or $150 \div 30 (= 5)$, $150 \div 10 (= 15)$, $2.10 \div 15 (= 0.14)$ for process to find cost from Letters2send, e.g. $(150 \div 25) \times 3.49 (= 20.94)$ for process to find cost at Stationery World, e.g. $(150 \div 30) \times 2 \times 2.10 (= 21)$ for correct conclusion with correct values from each shop (20.94 and 21) OR for the start of a process to find comparable costs, eg $3.49 \div 25 (= 0.1396)$, $2.10 \div 10 (= 0.21)$, $25 \div 3.49 = (7.1\dots)$, $2.10 \div 15 (= 0.14)$ for process to take into account the offer at Stationery World, eg buy 30 envelopes pay for 20, for complete process to find values that can be used for comparison, eg $30 \times 0.13(96)$ and $2 \times 2.10 (= 4.2(0))$ for correct conclusion with correct values from each shop (4.1(88) and 4.2(0))

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Question	Working	Answer	Mark	Notes
11 (a)		29	B1	answer in the range 29 to 30
(b)		186 to 195	M1 M1 A1	for changing 6ft 3 inches to inches e.g. $6 \times 12 + 3 (= 75)$ or changing 1ft to 30 cm for a method to convert to cm, e.g. $25 \rightarrow 63$ then $\times 3$, $6 \times 30 + \frac{1}{4} \times 30$ for answer in the range 186 to 195 or ft from correct use of graph
12		0.0733(03...)	M1 A1	for correct numerator (3.4496.....) or correct denominator (47.0596) or 0.073 for 0.0733(03.....)
13 (a)		Rotation	B2 [B1	for a fully correct rotation at $(-4,-1)$, $(-3,-1)$, $(-4,-4)$, $(-1,-2)$ for the quadrilateral in correct orientation and size or rotated 90° anticlockwise about the origin]
(b)		Reflection in the y-axis	B1 B1	for reflection for y-axis (or $x=0$) [A combination of transformations scores 0 marks]

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Question	Working	Answer	Mark	Notes
14 (a)		$5(1 - 2m)$	B1	cao
(b)		$2ab(a + 3b)$	M1	for $2a(ab + 3b^2)$ or $2b(a^2 + 3ab)$ or $ab(2a + 6b)$ or $2ab$ (2 term expression with terms in a or b or ab , can include constants), eg $2ab(1a + 3ab)$, $2ab(1 + 3b)$
			A1	for $2ab(a + 3b)$
15 (a)		0.47	B1	
(b)		2.28×10^9	M1	for correct value but not in standard form, eg $22.8 \times 10^{3+5}$, 228×10^7 , 2 280 000 000 or for 2.28×10^n , $n \neq 9$
			A1	cao
16		T shown on the map	C1	for showing a perpendicular bisector or point T equidistant from points B and C .
			C1	for a circle or arc of circle of radius 2.5 cm or point T 2.5 cm from point A
			C1	for T shown in correct position

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Question	Working	Answer	Mark	Notes
17		98	P1	for process to find P(1), e.g. $1 - 0.17 - 0.18 - 0.09 - 0.15 - 0.1 (= 0.31)$ or for a process to find P(1 or 3), e.g. $1 - 0.17 - 0.09 - 0.15 - 0.1 (= 0.49)$
			P1	for process to find the number of 3s, e.g. $0.18 \times 200 (=36)$ or process to find the number of 1s, e.g. $P(1) \times 200 (= 62)$, or process to find the number of (1 or 3)s, eg $[P(1) + 0.18] \times 200$ or process to find any expected frequency, using any probability $\times 200$, eg 0.17×200
			A1	cao OR
		98	P1	for process to find P(2 or 4 or 5 or 6), eg $0.17 + 0.09 + 0.15 + 0.1 (= 0.51)$
			P1	for process to find the number of (2 or 4 or 5 or 6)'s, eg " 0.51 " $\times 200 (= 102)$
			A1	cao

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Question	Working	Answer	Mark	Notes
18		Yes (supported)	P1 P1 A1 P1 C1 OR P1 P1 A1 P1 C1	<p>for process to work out the total number of children, e.g. $117 \times 4 (= 468)$</p> <p>(dep P1) for process to work out total number of adults or the total number of people, e.g. $"468" \times 5 \div 2 (= 1170)$ or $"468" \times 7 \div 2 (= 1638)$</p> <p>for 1170 or 1638</p> <p>for process to work out the percentage of theatre full, e.g. $\frac{"468"+"1170"}{2600} \times 100 (= 63)$ or for a process to work out 60% of 2600 ($= 1560$)</p> <p>for a correct conclusion supported by correct figures e.g. 63% or 1560 and 1638</p> <p>OR</p> <p>for a process to work out 60% of 2600, eg. $\frac{60}{100} \times 2600 (= 1560)$</p> <p>(dep P1) for process to work out total number of children, e.g. $"1560" \times 2 \div 7 (= 445(.7...))$</p> <p>for 445(.7...)</p> <p>for process to work out number of children in the circle, eg. $"445(.7...)" \div 4 (= 111 \text{ to } 112)$</p> <p>for a correct conclusion supported by correct figures e.g. 111 to 112</p> <p>[Where appropriate, accept rounded or truncated values]</p>

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Question	Working	Answer	Mark	Notes
18 cont.			<p>P1</p> <p>P1</p> <p>A1</p> <p>P1</p> <p>C1</p>	<p>OR</p> <p>for a process to find the maximum number of children, eg. $2600 \times 2 \div 7 (= 742(.8\dots))$</p> <p>for process to work out the total number of children, e.g. $117 \times 4 (= 468)$</p> <p>for 468 and $742(.8\dots)$</p> <p>for $\frac{468}{742(.8\dots)} \times 100 (= 63)$ or process to work out 60% of “742.8..” (= $445(7\dots)$)</p> <p>for a correct conclusion supported by correct figures e.g. 63% or 468 and $445(7\dots)$</p> <p>[Where appropriate, accept rounded or truncated values]</p>
19		<p>Side elevation</p> <p>Front elevation</p>	<p>C2</p> <p>[C1]</p> <p>C2</p> <p>[C1]</p>	<p>for the side elevation (4 cm by 2 cm rectangle with a solid line drawn 1 cm from the 2 cm edge, and correct orientation)</p> <p>for the side elevation as a rectangle]</p> <p>for the front elevation as a trapezium in correct orientation with base 4 cm, parallel sides 1 cm and 4 cm</p> <p>for the front elevation as a trapezium with two right angles]</p> <p>[Ignore incorrect or no labelling]</p>

Paper 1MA1: 2F

Question	Working	Answer	Mark	Notes
20 (a)		57.1	P1	for a process to find time from Liverpool to Manchester, eg. $56 \div 70 (= 0.8 \text{ (hrs) or } 48 \text{ (mins)})$
			P1	for a process to find the total distance, eg $56 + 61 (= 117)$ or the total time, eg “48” + 75 (= 123) or “0.8” + $\frac{75}{60} (= 2.05)$, with consistent units of time
			P1	(dep P2) for a correct process to find average speed with consistent units of time, eg. “117” \div “2.05” or “117” \div “123”
(b)		explanation	A1	for answer in the range 57 to 57.1
			C1	for explaining that the time taken for the two parts of the journey must be the same or the distance from Leeds to York is $\frac{3}{4}$ the distance from Barnsley to York oe
21 (a)		3.9	M1	for a ratio of $\frac{8.1}{5.4} (= 1.5)$ oe or $\frac{5.4}{8.1} (= 0.66..)$ oe or $\frac{2.6}{5.4} (= 0.48..)$ oe or $\frac{5.4}{2.6} (= 2.07..)$ oe
			A1	cao
(b)		2.05	M1	for $\frac{5.4}{8.1} \times 6.15 (= 4.1)$ or $\frac{2.7}{8.1} \times 6.15$ oe or ft “scale factor” from (a)
			A1	cao

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Question	Working	Answer	Mark	Notes
22		Secure Bank (supported)	P1 P1 C1	for a process to work out the interest after one year e.g. $0.02 \times 25000 (= 500)$ or $0.043 \times 25000 (= 1075)$ or for 1.02 or 25500 or 1.043 or 26075 for process to find value of the investment after 3 years or the multiplicative factor for 3 years at one of the banks, e.g. $25000 \times 1.02 \times 1.02 \times 1.02$ oe (= 26530...) or $1.02^3 (= 1.0612\dots)$ or $25000 \times 1.043 \times 1.009 \times 1.009$ oe (= 26546...) or $1.043 \times 1.009 \times 1.009 (= 1.0618\dots)$ [accept total interest of 1530...or 1546...if final values of investment are not found] for Secure Bank from correct figures eg 26530.. and 26546..or 1530.. and 1546.. or 1.0612.. and 1.0618
23		$4.755 \leq n < 4.765$	B2 [B1]	for $4.755 \leq n < 4.765$ for 4.755 or 4.765 or 4.7649]
24		$x = -8, x = 3$	M1 M1 A1	for factorisation or for substitution into quadratic formula ($x \pm a$)($x \pm b$) where product of a and $b = 24$, eg ($x \pm 4$)($x \pm 6$) or difference of a and $b = 5$, eg ($x \pm 2$)($x \pm 7$) $\frac{-5 \pm \sqrt{5^2 - 4 \times 1 \times -24}}{2}$ oe (condone one sign error) for ($x + 8$)($x - 3$) or for $\frac{-5 \pm \sqrt{121}}{2}$ oe cao

Paper 1MA1: 2F				
Question	Working	Answer	Mark	Notes
25 (a)		$5n - 2$	B2	for $5n - 2$ oe
			[B1	for $5n + k$, k may be 0]
(b)		No (supported)	C1	for No with evidence, e.g. $3 \times 4^2 = 48$, $\sqrt{48}$ is not an integer, he has multiplied by 3 first but should have squared first