
Bronze Level

Mark Scheme 6

Level	IGCSE
Subject	Maths
Exam Board	Edexcel
Difficulty Level	Bronze
Booklet	Mark Scheme 6

Time Allowed: 54 minutes

Score: /45

Percentage: /100

Grade Boundaries:

A*	A	B	C	D	E	U
>85%	75%	60%	45%	35%	25%	<25%

1.	(a)		$n(n + 8)$	2	B2 Award B2 also for $(n \pm 0)(n + 8)$ B1 for factors which, when expanded & simplified, give two terms, one of which is correct SC B1 for $n(n + 8n)$
	(b)	$6x - 15 - 4x - 12$		2	M1 for 3 correct terms
			$2x - 27$		A1 cao
	(c)	$y^2 + 2y + 7y + 14$		2	M1 for 3 correct terms out of 4 or for 4 correct terms ignoring signs or for $y^2 + 9y + c$ for any non-zero value of c or for $\dots + 9y + 14$
			$y^2 + 9y + 14$		A1 cao
Total 6 marks					

2.	$8.6^2 - 6.9^2$ or $73.96 - 47.61$ or 26.35		3	M1 for squaring and subtracting
	$\sqrt{8.6^2 - 6.9^2}$ or $\sqrt{26.35}$			M1 (dep) for square root
		5.13		A1 for answer which rounds to 5.13
Total 3 marks				

3.	$5x = -15$ or $5x = 1 - 16$ or $3x + 2x = -15$ or $5x + 15 = 0$		3	M2 for correct rearrangement with x terms on one side and numbers on the other AND correct collection of terms on at least one side M2 also for $-5x = 15$, $-5x = 16 - 1$ or $-2x - 3x = 15$ M1 for correct rearrangement with x terms on one side and numbers on the other eg. $3x + 2x = 1 - 16$ or $16 - 1 = -2x - 3x$ or correct collection and simplification of either numbers or x terms eg. $5x + 16 = 1$ or $5x = a$ or $5x - a = 0$ or $nx = -15$ ($n \neq 5$)
		-3		A1 Award 3 marks if M1 scored and answer correct.
				Total 3 marks

4.	$5 + 9$ or 14 seen or or $\frac{n}{14}$ oe (provided no evidence of 14 from incorrect method)		3	M1 or $\frac{5+9}{5+9+6} \times x = 56$
	$56 \div "14"$ or 4 or $\frac{6}{14} \times 56$			M1 dep or $56 \div \frac{14}{20}$ or 80
		24		A1 Also accept 20 : 36 : 24 as final answer
				Total 3 marks

5.	arc centre B cutting BA and BC at (say) P and Q		2	M1
	arcs centres P and Q of equal radii which intersect at R (say) and BR joined (overlay)			A1 dep
				Total 2 marks

6.	$-2 \leq x \leq 4$ $1 \leq y \leq 3$ or $x \geq -2$ $x \leq 4$ $y \geq 1$ $y \leq 3$	3	B3 B2 for 3 correct inequalities B1 for 2 correct inequalities (Treat double-ended inequalities as two separate inequalities) Accept < and > throughout
			Total 3 marks

7. (a)		$5x^3y^2$	2	B2 B1 for 2 of 5, x^3 , y^2 correct in a single product with no additional terms or $5x^{5-2}y^{6-4}$
(b)		$8n^{12}$	2	B2 B1 for 8 or n^{12} in a product
				Total 4 marks

Apart from Questions 3(c), 19(b) and 20(b) (where the mark scheme states otherwise), the correct answer, unless clearly obtained by an incorrect method, should be taken to imply a correct method.

Question Number	Working	Answer	Mark	Notes
8.	$(0 \times 13) + 1 \times 2 + 2 \times 3 + 3 \times 8 + 4 \times 14$ or $(0) + 2 + 6 + 24 + 56$ or 88		3	M1 for sum of at least 3 products (products may or may not be evaluated)
	"88" \div 40			M1 (dep) for division by 40 (or by their 40)
		2.2		A1 accept 2.2 or $\frac{11}{5}$ or $2\frac{1}{5}$ Also accept '2' if both method marks are scored.
				Total 3 marks

9. (a)	$\frac{2.720294102}{7.7}$		2	M1 for 2.72029... if first 5 figures correct (rounded or truncated) or for 7.7 or for $\frac{2\sqrt{185}}{77}$
		0.35328(4948)		A1 Accept if first 5 figures correct
(b)		0.35	1	B1 ft from (a) only if more than 2 sig figs given in (a)
				Total 3 marks

10	(a)		$6n - 12$	1	B1
	(b)		$p(p - 5)$	2	B2 Also accept $(p+0)(p-5)$ for B2 B1 for factors which, when expanded and simplified, give two terms, one of which is correct. SC B1 for $p(p - 5p)$
	(c)	$7x - 3 = 2x$		3	M1 for $7x - 3 = 2x$ or $7x - 3 = 2 \times x$ or $\frac{7x}{2} - \frac{3}{2} = x$ oe
		$7x - 2x = 3$ or $5x = 3$			M1 for $7x - 2x = 3$ or $5x = 3$ or $5x - 3 = 0$ or $\frac{7x}{2} - x = \frac{3}{2}$ or $\frac{5x}{2} = \frac{3}{2}$ NB. All these examples could be written with all terms 'on the other side' eg $-5x = -3$ etc
			$\frac{3}{5}$ oe		A1 Award full marks if at least one method mark awarded and answer correct.
					Total 6 marks

11. (i)		u, a, e	2	B1	Any order. Brackets and commas not necessary
(ii)		s, q, r, a, e, i, o, u		B1 B0 if 'a' or 'e' or 'u' repeated	
					Total 2 marks

Question	Working	Answer	Mark	Notes
12 (a)	$1 - (0.3 + 0.35 + 0.15)$	0.2 oe	2	M1 for a complete method A1 for 0.2 oe as a fraction or percentage eg. 20%, $\frac{1}{5}$ etc.
(b)	0.15×40 oe	6	2	M1 A1 cao NB. An answer of $\frac{6}{40}$ scores M1 A0
				Total 4 marks

13	$495 \div 2.25$	220	3	M2 M1 for $495 \div 2.15$ or 230.2... rounded or truncated to 3 or more sig figs A1 cao Alternative M1 for $495 \div 135$ or $3.\overset{\cdot}{6}$ or 3.666.. rounded or truncated to 3 or more sig figs M1dep for "3.66.." x 60 A1 220 cao
				Total 3 marks