

Algebra: Quadratics, Rearranging Formulae and Identities

Calculator 20 minute test 3

Q	Answer	Mark	Comments
1	$x^2 - 5x - 2x - 10$	M1	Expands one bracket correctly. Sight of $x^2 - 5x$ or $2x + 10$ or $-2x - 10$
	$x^2 - 7x - 10$	A1	
2	$3 \times 7^2 + 2$	M1	Substitutes $x = 7$
	51	A1	
3(a)	Subtract 7	B1	Or uses symbols
	Multiply by 2	B1	Or uses symbols
3(b)	Multiplies by 2	B1	Or uses symbols
	Subtracts 14	B1	Or uses symbols
NB: answers to 3(b) given in 3(a) or vice versa are acceptable			
4	$2.5 \times 6.3 = 15.75$ so 16m^2	M1	Finds area of a rectangle <i>and rounds correctly</i> .
	$C = 4 \times \text{their } 16 + 25$	M1	Substitutes $A = 16$
	$C = 89$	A1ft	ft M0M1
5	$d^2 = 9 - 16a$	M1	Isolates d^2
	$d = \sqrt{9 - 16a}$	A1	
6	$(x^2 + 6x - 6x - 36) - 3$	M1	Expands brackets to give four terms or $(x^2 - 36) - 3$
	$x^2 - 39$	A1	
7	$(x \pm 11)(x \pm 9)$	M1	Factorises using correct numbers
	$(x - 11)(x + 9)$	A1	

Q	Answer	Mark	Comments
8	$y^2 - 4y - 21y + 84$	M1	Expands either set of brackets to give four terms. Allow one error.
	$y^2 - 25y + 84$	A1	