Topic Test 1 Mark Scheme

Further equations and graphs - Higher

Q	Answer	Mark	Comments
1(a)	$5x + 5x + 4x + 3x + 2x + x$ $= 4 \times 180$ or 720	M1	
	$20x = 720$	M1dep	
	36	A1	
1(b)	$5x = 5 \times 36 = 180$, so two angles are straight lines. The shape is actually a quadrilateral with angles, 144, 108, 72 and 36	B1	oe
2(a)	$2\frac{1}{2}$	B1	
2(b)	$4\frac{1}{2}$ and $1\frac{1}{2}$	B1	either order
2(c)	$\frac{3}{4}$	B1	
2(d)	$1\frac{1}{2}$	B1	
3	$2x^2 + 3x - 4 = 2x + 2$	M1	
	$2x^2 + x - 6 = 0$	M1dep	
	$(2x + 3)(x - 2) = 0$	A1	
	$-1\frac{1}{2}$ and 2	A1ft	ft their factorisation if product of coefficients is 2 and product of constant terms is ±6

Q	Answer	Mark	Comments
4(a)	B	B1	
4(b)	C	B1	
5	$\frac{-7 \pm \sqrt{(7)^2 - 4 \times 3 \times -8}}{2 \times 3}$	M1	
	$\frac{-7 \pm \sqrt{145}}{6}$	A1	
	0.84 and –3.17	A1	
6	A = (–4, 0) B = (–1, –9) C = (0, –8) D = (2, 0)	B3	B2 3 correct B1 2 correct