



UKMT Team Maths Challenge
Regional Final 2011
Crossnumber

1	2			3		4		5
			6		7			
8							9	
		10				11		
12	13				14		15	16
	17			18				
19			20				21	
		22		23				
24						25		

Across

- 1 A prime factor of 7997 (3)
- 4 A multiple of seven, whose digits add up to four (3)
- 6 A power of seventeen (4)
- 8 Less than twenty percent of 20 Down (2)
- 9 The mean of two consecutive Fibonacci numbers (2)
- 10 A multiple of three which is also half of a cube number (3)
- 11 The square root of 9 Down (2)
- 12 Half of 8 Down (2)
- 15 A number which can be expressed as the sum of a triangular number and a square number in three different ways (2)
- 17 The size, in degrees, of an angle in an isosceles triangle whose largest angle is (18 Across)^o (2)
- 18 A number with exactly four factors (3)
- 19 The highest common factor of 8 Down and 22 Down (2)
- 21 The longest side of a right-angled triangle whose shorter sides are 7 Down and 12 Across (2)
- 22 A prime number whose digits are four of the factors of 19 Across and in decreasing order (4)
- 24 A factor of 6 Down (3)
- 25 A palindromic multiple of eleven (3)



UKMT Team Maths Challenge
Regional Final 2011
Crossnumber

1	2			3		4		5
			6		7			
8							9	
		10				11		
12	13				14		15	16
	17			18				
19			20				21	
		22		23				
24						25		

Down

- 2 A prime factor of 7887 (3)
- 3 (One half of 15 Across) added to (two-sevenths of 8 Down) (2)
- 4 A palindromic multiple of three (2)
- 5 The size, in degrees, of the interior angle of a regular polygon with nine times as many sides as the regular polygon whose interior angle is (10 Across)^o (3)
- 6 A multiple of eleven (4)
- 7 The shortest side of a right-angled triangle whose longer sides are 12 Across and 21 Across (2)
- 8 The mean of 2 Down, 4 Down and 18 Across (3)
- 9 The square of 11 Across (3)
- 13 More than ten percent greater than 4 Across (3)
- 14 A power of seventy-one (4)
- 16 Sixteen less than a multiple of sixty-one (3)
- 19 A cube number (3)
- 20 A multiple of four, whose digits add up to fifteen (2)
- 21 The lowest common multiple of the ninth and tenth prime numbers (3)
- 22 (9 Across) percent of 19 Down (2)
- 23 (One more than 22 Across) divided by 4 Across (2)



UKMT Team Maths Challenge
Regional Final 2011
Crossnumber

Team Number.....

School Name

Answer	1	2		3		4		5	Marks (7)	
Mark										
Answer				6		7			Marks (6)	
Mark										
Answer	8							9	Marks (6)	
Mark										
Answer			10				11		Marks (6)	
Mark										
Answer	12	13				14		15	16	Marks (6)
Mark										
Answer		17			18					Marks (6)
Mark										
Answer	19			20				21		Marks (6)
Mark										
Answer			22		23					Marks (6)
Mark										
Answer	24						25			Marks (7)
Mark										

Total = _____ /56

+ 4

Score = _____