



Senior Team Maths Challenge 2008  
Regional Final Crossnumber Round



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			26				27		

Across

- 1  $p^3 - p^2 - 3$  where  $p$  is a prime number
- 3 Half the product of the distinct prime factors of 12 Across
- 4  $x$  where  $x^2 - 40x + 144 = 0$
- 6 Mean of 1 Across, 8 Across and 9 Across
- 8 Sum of the prime factors of 15 Down
- 9 A triangle number squared
- 12 7 Down times 2 Down minus twice 1 Down
- 14 Multiple of both the square root of 4 Across and 7 Down
- 16 Twice a Fibonacci number
- 18 8 Across plus a multiple of 10 Down but not divisible by four
- 20 27 Across minus 7 Down
- 22 To the nearest whole number, the result of twice 11 Down divided by 1 Down
- 23 The difference between 25 Across and 23 Across is 2 Down
- 25 see 23 Across
- 26 20 Across plus the smallest difference between 27 Across and a Fibonacci number
- 27 A cube



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Down

- 1  $p^2+2(p-7)$  where  $p$  is a prime number
- 2 Exterior angle in degrees of a regular polygon
- 3 Multiple of 1 Down
- 5 One more than a multiple of four and one less than a multiple of three
- 7 Four more than a triangle number, two less than a square number
- 10 Twice a Fibonacci number
- 11 One more than the difference between 5 Down and 15 Down
- 12 Half the lowest common multiple of 6 Across and 8 Across
- 13 Number where consecutive digits differ by two
- 15 Product of two consecutive primes, its digit product being less than its digit sum
- 17  $x^2+2x+2$  where  $x$  is an integer
- 19 Eight more than a multiple of eleven
- 20 Product of one sixth of 24 Down and one more than one sixth of 24 Down
- 21 Multiple of 7 Down
- 22 Number whose digit sum is equal to the highest common factor of 4 Across and 8 Across
- 24 Two thirds of a square number



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Team Number.....

School / College Name .....

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25			26				27		

Total (8)
Total (6)
Total (6)
Total (6)
Total (6)
Total (6)
Total (6)
Total (6)
Total (8)

Total score = \_\_\_\_\_/64