



Across

- 1 p^{p-3} where p is prime
- 4 $16 \text{ Across} + 14 \text{ Across} - 27 \text{ Across} + \text{half the difference of } 13 \text{ Down and } 15 \text{ Down}$
- 6 Product of two consecutive integers
- 8 Odd multiple of eight, the highest common factor of 8 Across and 18 Across is two
- 9 The sum of 3 Down, 4 Across and twice 1 Across
- 11 Palindrome, the square of whose digit sum is equal to four times its digit product
- 14 27 Across minus a multiple of thirteen
- 16 x^4 where x is an integer
- 18 Multiple of three
- 20 Half the product of two consecutive Fibonacci numbers
- 21 Divisible by three but not nine
- 23 Two more than 28 Across minus 7 Down
- 25 21 Across plus 4 Down
- 26 Multiple of thirteen
- 27 $16 \text{ Across} + 11 \text{ Across}$
- 28 One more than the cube of a prime number



	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				28				

Down

- 2 One third the product of two consecutive Fibonacci numbers
- 3 Triangle number
- 4 Square
- 5 One more than a square and three less than a cube
- 7 Two more than 28 Across minus 23 Across
- 10 Five less than a triangle number
- 12 Multiple of 3 Down, not divisible by five or nine
- 13 Twice the digit product plus half the digit sum of 15 Down
- 15 Product of two consecutive primes
- 17 $2^n + 1$ where n is an even integer
- 18 $[1 \times 2 \times 3 \times \dots \times n] - [1 \times 2 \times 3 \times \dots \times (n-1)]$ where n is an integer
- 19 Prime three less than a multiple of eleven
- 21 The mean of 17 Down, 19 Down and 21 Down is one more than 1 Across
- 22 Palindrome which is twice a number one less than a multiple of twelve
- 24 Digit sum of 24 Down is a multiple of six
- 25 Multiple of half 10 Down



Senior Team Maths Challenge 2009
National Final Crossnumber Round



Team Number..... School / College Name

	1	2		3		4			
5				6					7
		8				9	10		
11	12				13				
			14	15			16	17	
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	27				28				

Total (7)
Total (6)
Total (8)
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Total (7)
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Total score = _____/68