

❄ Christmas Puzzlehunt ❄

The answer to each puzzle is a word or small phrase - it's up to you to work out how to get there! In order to solve the meta puzzle, you will need to use the answers from the previous puzzles. Non-meta puzzles can be done in any order but for convenience they are given below in ascending order. You may use the internet or any other resources whenever and however you want.

If you get stuck on a puzzle, consider trying another puzzle and coming back to it with fresh eyes. You could also consider the following:

- Are there any clues in the title or accompanying text?
- Is there part of the main puzzle you haven't used yet?
- Have you considered braille, morse code, semaphore and other encryptions?
- Have you talked to someone about the puzzle? Two heads are better than one!

Carol Singers [1]

α) _____

Transmute Transmute [1]

β) _____

Times With Royalty [4]

γ) _____

Labyrin Th Reat [4]

δ) _____

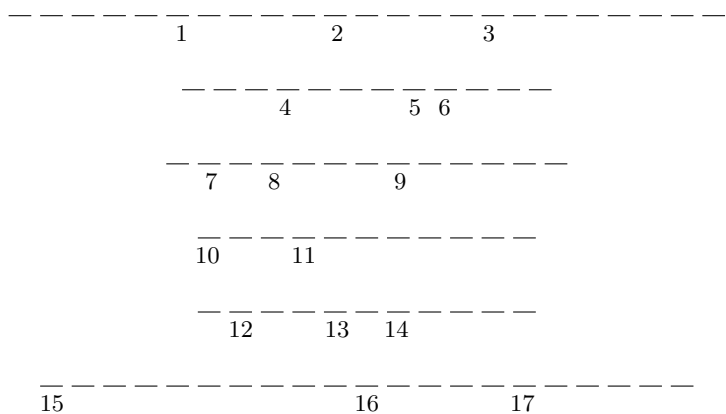
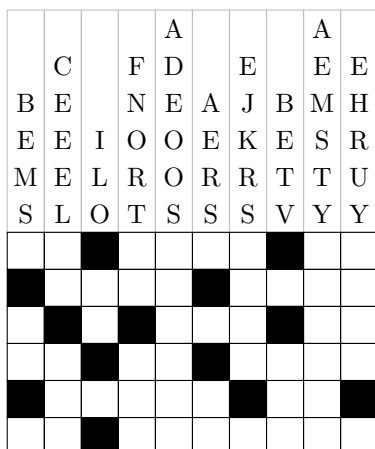
Measurement [4]

ϵ) _____

No Q. [4]

ζ) _____

Advent Calendar - Meta



❄ Measurement ❄

acRe, cables, celcuis, centimetre, cHains, Days, decadEs, fahrenHeit, farthings, faThoms, feet, florin, fluidOunces, fortnight, furlongs, gill, grAms, hoUrs, kilogram, leagues, Miles, millenium, millimetreS, miNutes, ounces, perches, pints, pOund, seconds, Shillings, sixpencE, stonEs, taBlespoons, tons, weeks, yarD

(-40, -40) (1, 1) (1, 2) (1, 3) (1, 5) (2, 6) (1, 10) (1, 16) (3, 21) (1, 24) (3, 30) (3, 96) (1, 100) (1, 160) (4, 240) (3, 300) (1, 336) (4, 640) (1, 1000)

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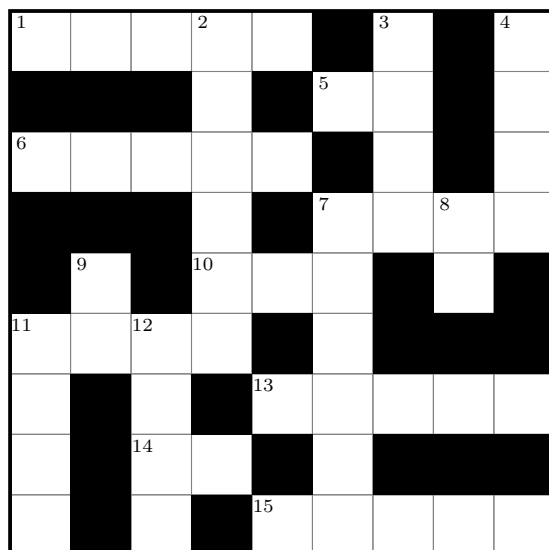
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Year	1990	1991	1992	1993	1994
1990	100	100	100	100	100
1991	100	100	100	100	100
1992	100	100	100	100	100
1993	100	100	100	100	100
1994	100	100	100	100	100

- | | | |
|------------------------------------|------------------------------------|----------------------------------|
| Maths topic (7) | Sportsman on frozen water (9) | Unconscious response (6) |
| State of worry (7) | Carbon 13 e.g. (7) | Range of skills (10) |
| Made from clay (7) | Big (5) | Look for (6) |
| Strong box (5) | Fizzy citrus drink (8) | Sword holder (7) |
| Mid-sentence break (5) | Holds many fire starters (8) | Edible marine mollusc (9) |
| Bike rider (7) | Chain of jewelry (8) | Smooth, made more efficient (11) |
| Type of government (9) | 8th planet (7) | Leave speechless (4) |
| Senior journalist (6) | Dragonfly larva (5) | Out of the blue (6) |
| Letter holder (8) | Last greek letter (5) | Mexican spirit (7) |
| Destroy completely (9) | Using a web browser (6) | Cigar ingredient (7) |
| Activity using physical effort (8) | Child without parents (6) | Red fruit (6) |
| Decorate e.g. with parsley (7) | Contradictory figure of speech (8) | Opressive rule (7) |
| Army rank (7) | View point (11) | Not reliable (13) |
| Plant eater (9) | Camera picture (5) | One of your 5 a day (9) |
| Tentative guess (10) | Governed by chance (6) | |

❄ Advent Calendar ❄

The integer answer to each of the clues below must first be converted before it is entered into the grid.
There are three distinct methods of conversion.



Across

Down

- 1) Ten minus three
- 5) $-100 + 1000$
- 6) One plus two
- 7) $1 \cdot 40000 + 3 \cdot 4000 + 11 \cdot 400 + 2 \cdot 40 + 14$
- 10) $-50 + 1000$
- 11) $9 \cdot 7000 + 1 \cdot 700 + 7 \cdot 70 + 1 \cdot 7 + 6$
- 13) twelve multiplied by five
- 14) $10 + 1$
- 15) Two cubed

- 2) $16 \cdot 900000 + 11 \cdot 90000 + 6 \cdot 900 + 14 \cdot 9 + 5$
- 3) $-10 + 1000$
- 4) Square root of eighty one
- 7) $-2 + 500 + 60$
- 8) $7 \cdot 20 + 14 \cdot 2 + 3$
- 9) $5 \cdot 30 + 6 \cdot 3 + 2$
- 11) Twenty divided by five
- 12) $-5 + 200 + 20$

❄ Advent Calendar ❄

There are 25 special boxes in the grid which are to be found. Once the grid has been completed, use the special boxes to see what's inside the advent calendar.

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	
29			30					
31				32				

Across

- 2) The square of a power of 2 [5]
- 5) $(?5)^3 + 33$ where ? is a digit to be found [5]
- 7) A palindrome divisible by 9 [5]
- 8) $(2?)^2 + \text{Alpha}$ where ? is a digit to be found [3]
- 10) This number is of the form $xyxyz$ where $x > y > z$ are digits [5]
- 12) 100 more than a cube [3]
- 14) A square whose digits sum to 16 [3]
- 16) $(1XY)^2$ where X and Y are distinct digits that sum to 10 [5]
- 18) 83 less than a cube [6]
- 20) The first three digits are odd, the last three are distinct squares [6]
- 21) 2 more than a power of 2 [4]
- 22) A multiple of 7 [3]
- 24) 1 less than a square [3]
- 27) A palindrome [4]
- 29) 123 more than a cube [3]
- 30) The second and fourth digit are the same, the third and last digit are also the same [5]
- 31) The first three digits form a square and sum to square. The last 3 digits sum to 9 with the fifth digit being the average of the fourth and sixth digit [6]
- 32) Removing either the first or second digit leaves a palindrome [7]

Down

- 1) This number doesn't contain a 0, and is 1000 more than a cube [5]
- 2) The sum of the first four digits is equal to the fifth digit [5]
- 3) The difference between the first two digits is 6 [4]
- 4) A multiple of 613 [4]
- 5) A power of 2 [4]
- 6) The sum of the last two digits is equal to the fifth digit, the remaining digits sum to 11 [7]
- 9) $(X80) \times (X77)$ where X is a digit to be found [5]
- 11) Contains no repeated digits and the first two digits sum to the last digit [4]
- 13) Delta [4]
- 15) Zeta [4]
- 17) The first and third digit are the same, the second and fourth are the same [4]
- 18) Gamma [4]
- 19) The first and second group of three digits sums to the last digit which is a perfect number [7]
- 20) Beta less than a square cube [5]
- 23) Epsilon [4]
- 25) The first three digits of this square sum to one more than the last digit [4]
- 26) A multiple of 117 [5]
- 27) 135 more than a cube number [3]
- 28) $(1?9)^2$ where ? is a digit from 1 to 9 [5]