



Assignment



What is the fast way or method to identify or create the following matrices (less than 1 minute)?

Please do not use **the traditional way or method such as** (i.e. $A = [1 \ 2 \ 3 \ 4 \ 5; \dots\dots\dots]$):

$A = \begin{bmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 \\ 11 & 12 & 13 & 14 & 15 & 16 & 17 & 18 & 19 & 20 \\ 21 & 22 & 23 & 24 & 25 & 26 & 27 & 28 & 29 & 30 \end{bmatrix};$	(1)
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$B = \begin{bmatrix} 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 66 \\ 0 & 0 & 0 & 0 \end{bmatrix};$	(2)
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$C = \begin{bmatrix} 1 & 0 & 0 & 0 & 0 \\ 0 & 2 & 0 & 0 & 0 \\ 0 & 0 & 3 & 0 & 0 \\ 0 & 0 & 0 & 4 & 0 \\ 0 & 0 & 0 & 0 & 5 \end{bmatrix};$	(3)
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$D = \begin{bmatrix} 0 & 0 & 0 & 0 & 0 \\ 0 & -1,5 & 0 & 0 & 0 \\ 0 & 0 & -3 & 0 & 0 \\ 0 & 0 & 0 & -4,5 & 0 \\ 0 & 0 & 0 & 0 & -6 \end{bmatrix};$	(4)
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$$E = \begin{bmatrix} 88 & 0 & 0 & 88 \\ 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 \\ 88 & 0 & 0 & 88 \end{bmatrix}; \quad (5)$$

$$F = \begin{bmatrix} 51 & 0 & 0 & 0 & 0 & 0 \\ 0 & 41 & 0 & 0 & 0 & 0 \\ 0 & 0 & 31 & 0 & 0 & 0 \\ 0 & 0 & 0 & 21 & 0 & 0 \\ 0 & 0 & 0 & 0 & 11 & 0 \\ 0 & 0 & 0 & 0 & 0 & 1 \end{bmatrix}; \quad (6)$$

$$G = \begin{bmatrix} 2 & 3 & 4 & 5 & 6 & 7 \\ 1,1 & 1,2 & 1,3 & 1,4 & 1,5 & 1,6 \\ 8 & 6 & 4 & 2 & 0 & -2 \end{bmatrix}; \quad (7)$$

$$H = \begin{bmatrix} 77 & 77 & 77 & 77 \\ 77 & 77 & 77 & 77 \\ 77 & 77 & 77 & 77 \\ 77 & 77 & 77 & 77 \end{bmatrix}; \quad (8)$$

$$I = \begin{bmatrix} 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 \\ 8 & 6 & 4 & 2 & 0 \end{bmatrix}; \quad (9)$$

$J = \begin{bmatrix} 0 & 0 & 0 & 0 & 8 \\ 0 & 0 & 0 & 0 & 7 \\ 0 & 0 & 0 & 0 & 6 \\ 0 & 0 & 0 & 0 & 5 \\ 0 & 0 & 0 & 0 & 4 \end{bmatrix}$	(10)
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$K = \begin{bmatrix} 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 8 & 6 & 4 & 2 & 0 & -2 \end{bmatrix};$	(11)
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$L = \begin{bmatrix} 1 & 0 & 0 & 1 & 0 & 0 \\ 0 & 1 & 0 & 0 & 1 & 0 \\ 0 & 0 & 1 & 0 & 0 & 1 \end{bmatrix};$	(12)
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$M = \begin{bmatrix} 0 & 0 & 0 & 1 & 1 \\ 0 & 0 & 0 & 1 & 1 \end{bmatrix};$	(13)
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$N = \begin{bmatrix} 7 & 0 & 0 & 55 & 0 & 0 \\ 0 & 7 & 0 & 0 & 55 & 0 \\ 0 & 0 & 7 & 0 & 0 & 55 \end{bmatrix};$	(14)
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$O = \begin{bmatrix} 99 & 0 & 0 & 7 & 7 & 7 & 66 & 0 & 0 \\ 0 & 99 & 0 & 7 & 7 & 7 & 0 & 66 & 0 \\ 0 & 0 & 99 & 7 & 7 & 7 & 0 & 0 & 66 \end{bmatrix}$	(15)
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$P = \begin{bmatrix} 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 \\ 8 & 7 & 6 & 5 & 0 \\ 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 \end{bmatrix}$	(16)
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