



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. $A = [1 \ 2 \ 3 \ 4 \ 5; \dots\dots\dots]$):

$G = \begin{bmatrix} 2 & 3 & 4 & 5 & 6 & 7 \\ 1,1 & 1,2 & 1,3 & 1,4 & 1,5 & 1,6 \\ 8 & 6 & 4 & 2 & 0 & -2 \end{bmatrix};$	(1)
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$H = \begin{bmatrix} 77 & 77 & 77 & 77 \\ 77 & 77 & 77 & 77 \\ 77 & 77 & 77 & 77 \\ 77 & 77 & 77 & 77 \end{bmatrix};$	(2)
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$I = \begin{bmatrix} 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 \\ 8 & 6 & 4 & 2 & 0 \end{bmatrix};$	(3)
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$J = \begin{bmatrix} 0 & 0 & 0 & 0 & 8 \\ 0 & 0 & 0 & 0 & 7 \\ 0 & 0 & 0 & 0 & 6 \\ 0 & 0 & 0 & 0 & 5 \\ 0 & 0 & 0 & 0 & 4 \end{bmatrix}$	(4)
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$K = \begin{bmatrix} 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 8 & 6 & 4 & 2 & 0 & -2 \end{bmatrix};$	(5)
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$L = \begin{bmatrix} 1 & 0 & 0 & 1 & 0 & 0 \\ 0 & 1 & 0 & 0 & 1 & 0 \\ 0 & 0 & 1 & 0 & 0 & 1 \end{bmatrix};$	(6)
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$M = \begin{bmatrix} 0 & 0 & 0 & 1 & 1 \\ 0 & 0 & 0 & 1 & 1 \end{bmatrix};$	(7)
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$N = \begin{bmatrix} 7 & 0 & 0 & 55 & 0 & 0 \\ 0 & 7 & 0 & 0 & 55 & 0 \\ 0 & 0 & 7 & 0 & 0 & 55 \end{bmatrix};$	(8)
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$O = \begin{bmatrix} 99 & 0 & 0 & 7 & 7 & 7 & 66 & 0 & 0 \\ 0 & 99 & 0 & 7 & 7 & 7 & 0 & 66 & 0 \\ 0 & 0 & 99 & 7 & 7 & 7 & 0 & 0 & 66 \end{bmatrix}$	(9)
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$P = \begin{bmatrix} 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 \\ 8 & 7 & 6 & 5 & 0 \\ 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 \end{bmatrix}$	(10)
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$Q = \begin{bmatrix} 88 & 88 & 33 & 33 \\ 88 & 88 & 33 & 33 \\ 44 & 44 & 66 & 66 \\ 44 & 44 & 66 & 66 \end{bmatrix};$	(11)
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$R = \begin{bmatrix} 88 & 88 & 88 & 88 \\ 88 & 88 & 88 & 88 \\ 66 & 66 & 66 & 66 \\ 66 & 66 & 66 & 66 \end{bmatrix};$	(12)
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$S = \begin{bmatrix} 88 & 0 & 0 & 77 & 0 & 0 & 66 & 0 & 0 \\ 0 & 88 & 0 & 0 & 77 & 0 & 0 & 66 & 0 \\ 0 & 0 & 88 & 0 & 0 & 77 & 0 & 0 & 66 \end{bmatrix};$	(13)
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