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| <p>Chapter 4 (p. 246, 4-1)</p> <p style="text-align: center;">address</p> | <p>address: The location of an entry in a matrix, given by the row and column in which the entry appears.</p> <p>In the matrix $A = \begin{bmatrix} 2 & 3 \\ 4 & 1 \end{bmatrix}$, the address of the entry 2 is a_{11}, the address of the entry 3 is a_{12}.</p> |
| <p>Chapter 4 (p. 246, 4-1)</p> <p style="text-align: center;">dimensions of a matrix</p> | <p>dimensions of a matrix: A matrix with m rows and n columns has dimensions $m \times n$, read “m by n.”</p> <p>$\begin{bmatrix} -3 & 2 & 1 & -1 \\ 4 & 0 & -5 & 2 \end{bmatrix}$ Dimensions 2×4 “2 by 4”</p> |
| <p>Chapter 4 (p. 246, 4-1)</p> <p style="text-align: center;">entry</p> | <p>entry: Each value in a matrix; also called an element.</p> <p>3 is the entry in the first row and second column of $A = \begin{bmatrix} 2 & 3 \\ 0 & 1 \end{bmatrix}$, denoted a_{12}.</p> |
| <p>Chapter 4 (p. 255, 4-2)</p> <p style="text-align: center;">main diagonal (of a matrix)</p> | <p>main diagonal (of a matrix): The diagonal from the upper left corner to the lower right corner of a matrix.</p> <p>$\begin{bmatrix} 3 & 1 & 2 \\ 5 & 0 & 1 \\ 2 & 7 & 6 \end{bmatrix}$</p> |

Chapter 4 (p. 246, 4-1)

matrix

matrix: A rectangular array of numbers.

$$\begin{bmatrix} 1 & 0 & 3 \\ -2 & 2 & -5 \\ 7 & -6 & 3 \end{bmatrix}$$

Chapter 4 (p. 288, 4-6)

row operation

row operation: An operation performed on a row of an augmented matrix that creates an equivalent matrix.

$$\begin{aligned} \left[\begin{array}{cc|c} 2 & 0 & -2 \\ 0 & 1 & 3 \end{array} \right] &= \left[\begin{array}{cc|c} \frac{1}{2}(2) & \frac{1}{2}(0) & \frac{1}{2}(-2) \\ 0 & 1 & 3 \end{array} \right] \\ &= \left[\begin{array}{cc|c} 1 & 0 & -1 \\ 0 & 1 & 3 \end{array} \right] \end{aligned}$$

Chapter 4 (p. 248, 4-1)

scalar

scalar: A number that is multiplied by a matrix.

$$\begin{array}{c} 3 \\ \uparrow \\ \text{scalar} \end{array} \begin{bmatrix} 1 & -2 \\ 2 & 3 \end{bmatrix} = \begin{bmatrix} 3 & -6 \\ 6 & 9 \end{bmatrix}$$

Chapter 4 (p. 255, 4-2)

square matrix

square matrix: A matrix with the same number of rows as columns.

$$\begin{bmatrix} 1 & 2 \\ 0 & -3 \end{bmatrix}, \begin{bmatrix} 1 & -3 & 1 \\ 2 & 0 & -2 \\ 0 & 1 & 3 \end{bmatrix}$$