Octave

Matrix Summations (Exercise C.3)

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Octave: Summations with Matrices

Suppose we have the 3×4 matrix A.

$$A = \begin{pmatrix} 5 & 2 & 1 & -1 \\ 1 & 3 & 2 & 5 \\ -1 & 4 & 7 & 1 \end{pmatrix}$$

1. Compute the sum totals for each column,
2. Compute the sum totals for each row,
3. Compute the overall sum total.

Octave: Summations with Matrices

Exercise 1: Compute the sum totals for each column.

- Default setting of the command `sum()`, when applied to a matrix.

Exercise 2: Compute the sum totals for each row.

- To work on a row-wise basis, we simply have to make the additional specification "2" to the `sum()` command.
- Alternatively we could use the tranpose operator (i.e. `A'`)

Exercise 3: Compute the overall sum totals for matrix A.

- To find the sum total of all elements in matrix A, we simply find the sum of one of our previous results.
- The structure of the command will look like `sum(sum(...))`.