Mathematics with the HP48G Calc

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1 Vector Algebra

1.1 Cross Product: Example 1

A first basic example is given as follows:
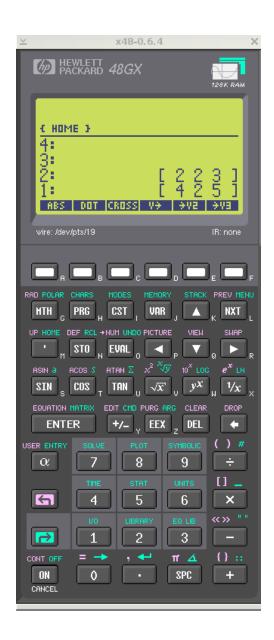
$$A = \begin{bmatrix} 2 \\ 2 \\ 3 \end{bmatrix} \qquad (1)$$

$$B = \begin{bmatrix} 4 \\ 2 \\ 5 \end{bmatrix} \qquad (2)$$

You may search for the cross-product with $A \times B = C$ It gives:

$$B = \begin{bmatrix} 4 \\ 2 \\ -4 \end{bmatrix} \qquad (3)$$

- Example (1) using the HP48G

    - You may enter [2 2 3]
    - You may enter [4 2 5]
    - In order to calculate the cross product, the "CROSS" function in the HP48G/HP50G will allow to give the solution:
    - The solution is: $[4 \; 2 \; -4]$

- Example (1) using nrpn:

  - nrpn is a rapid method to check the results with little GNU spreadsheet.

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INRPN (Tiny)| Spartrekus
     C1          C2          C3         C4        C5        C6        C7        C8
R1   ''c = a x b             -          -         -         -         -         -
R2   -           -           -          -         -         -         -         -
R3   ''A         ''B         ''C        -         -         -         -         -
R4   -           -           -          -         -         -         -         -
R5   2           4           4          -         -         -         -         -
R6   2           2           2          -         -         -         -         -
R7   3           5           -4         -         -         -         -         -
R8   -           -           -          -         -         -         -         -
R9   -           -           -          -         -         -         -         -
R10  -           -           -          -         -         -         -         -
R11  -           -           -          -         -         -         -         -
R12  -           -           -          -         -         -         -         -
R13  -           -           -          -         -         -         -         -
R14  -           -           -          -         -         -         -         -
R15  -           -           -          -         -         -         -         -
R16  -           -           -          -         -         -         -         -
R17  -           -           -          -         -         -         -         -
R18  -           -           -          -         -         -         -         -
R19  -           -           -          -         -         -         -         -
R20  -           -           -          -         -         -         -         -
R21  -           -           -          -         -         -         -         -
[1,1] = ''c = a x b #        -          -         -         -         -         -         0
```