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| **True or False?** | **Introduction to Matrices** |

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| $$A=\left(\begin{matrix}5&-2\\1&3\end{matrix}\right) B=\left(\begin{matrix}-1&0\\4&7\end{matrix}\right) C=\left(\begin{matrix}2\\3\end{matrix}\right) D=\left(\begin{matrix}-1\\8\end{matrix}\right) E=\left(\begin{matrix}-2&4\\2&0\end{matrix}\right) F=\left(\begin{matrix}3&-2\end{matrix}\right)$$ |

For each statement, circle the correct response.

Where a statement is false, correct it to make it true.

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| --- | --- | --- | --- |
| **1** | The order of matrix $C$ is $1×2$ | True | False |
|  |  |  |  |
| **2** | $$A+2E=\left(\begin{matrix}1&6\\5&3\end{matrix}\right)$$ | True | False |
|  |  |  |  |
| **3** | $$B+D=-2\left(\begin{matrix}1&0\\-6&-3.5\end{matrix}\right)$$ | True | False |
|  |  |  |  |
| **4** | $$C-\left(\begin{matrix}5\\1\end{matrix}\right)=D+2\left(\begin{matrix}-1\\3\end{matrix}\right)$$ | True | False |
|  |  |  |  |
| **5** | It is not possible to find $A+B-C$ | True | False |
|  |  |  |  |
| **6** | $$E-A=\left(\begin{matrix}-7&2\\1&-3\end{matrix}\right)$$ | True | False |
|  |  |  |  |
| **7** | $$2C-\left(\begin{matrix}2\\5\end{matrix}\right)=\left(\begin{matrix}-1\\25\end{matrix}\right)-3D$$ | True | False |
|  |  |  |  |
| **8** | An identity matrix must also be a square matrix | True | False |
|  |  |  |  |
| **9** | If $C+\left(\begin{matrix}x\\y\end{matrix}\right)=2D$ then $x=-4$ and $y=-13$ | True | False |
|  |  |  |  |
| **10** | $$2B+3I\_{2}=\left(\begin{matrix}1&0\\8&42\end{matrix}\right)$$ | True | False |
|  |  |  |  |
| **11** | $$\frac{5}{2}I\_{2}-A-\frac{1}{2}B=\left(\begin{matrix}-2&2\\-3&-4\end{matrix}\right)$$ | True | False |
|  |  |  |  |
| **12** | If $E-kB=\left(\begin{matrix}1&4\\-10&-21\end{matrix}\right)$ then $k=-3$ | True | False |