Showing Work on Calculations

## Physical Science

Mr. Pickett
Problem: If a 10 N force accelerates an object at $5 \mathrm{~m} / \mathrm{s}^{2}$, how massive is the object?

| G | Given - What values are given in the question? | Force $(\mathrm{F})=10 \mathrm{~N}$ <br> Acceleration $(\mathrm{a})=5 \mathrm{~m} / \mathrm{s}^{2}$ |
| :--- | :--- | :--- |
| $\mathbf{U}$ | Unknown - What value is unknown? What are you asked to solve for? | Mass (m) |
| $\mathbf{E}$ | Equation - What is the equation that will be used to solve for the unknown value? <br> (Use the triangle to rearrange the equation) | $\mathrm{m}=\frac{\mathrm{F}}{\mathrm{a}}$ |
| $\mathbf{S}$ | Setup - Write the equation with the given values included. | $\mathrm{m}=\underline{10 \mathrm{~N}} \frac{\mathrm{~m} / \mathrm{s}^{2}}{}$ |
| $\mathbf{S}$ | Solve - Use a calculator to solve the problem. <br> Check to make sure the answer makes sense. <br> Use the proper unit with you answer. | 2 kg |

The work on your paper would look like this:

| Force $(\mathrm{F})=10 \mathrm{~N}$ <br> Acceleration $(\mathrm{a})=5 \mathrm{~m} / \mathrm{s}^{2}$ <br> Mass $(\mathrm{m})$ <br> $\mathrm{m}=\frac{\mathrm{F}}{\mathrm{a}}$ <br> $\left.\mathrm{m}=\frac{10 \mathrm{~N}(\mathrm{~kg} \mathrm{x} \mathrm{m}}{} / \mathrm{s}^{2}\right)$ <br> $5 \mathrm{~m} / \mathrm{s}^{2}$ <br> 2 kg l |
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## Units

| mass | kilogram | kg |
| :--- | :--- | :--- |
| force |  |  |
| velocity |  |  |
| speed |  |  |
| work |  |  |
| power |  |  |
| momentum |  |  |
| distance |  |  |
| time |  |  |
| energy |  |  |
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