

ACTIVITY

11a

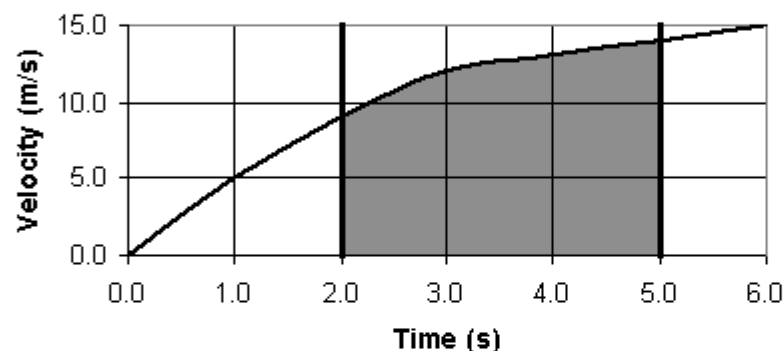
Connecting Math to Physics

More Complex Integrals

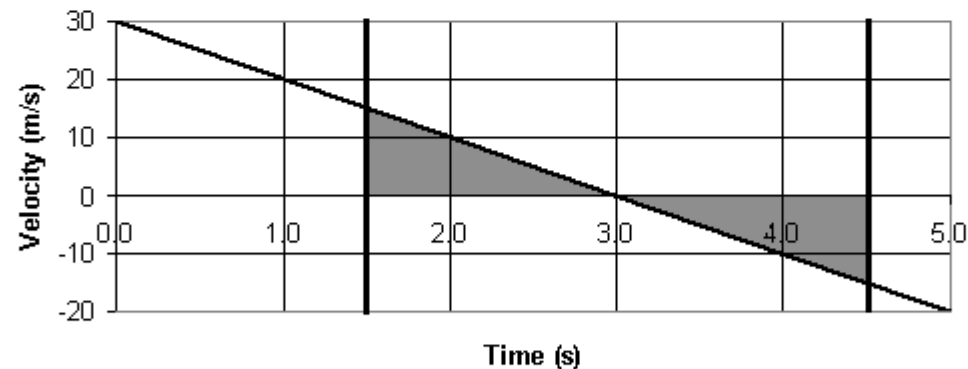
We cannot always find an exact integral with simple area formulae such as $A = lw$ or $A = (1/2)bh$. Often, the best we can do is an estimate. We can obtain an accurate estimate by breaking down the area under a graph into sections whose area we can calculate fairly accurately. Generally, the more sections we use, the more accurate our answer will be.

For each of the following exercises, estimate the integral and indicate the variable it is equal to based on the units. Note that areas under the x -axis are considered negative for the purposes of finding integrals.

1.



2.



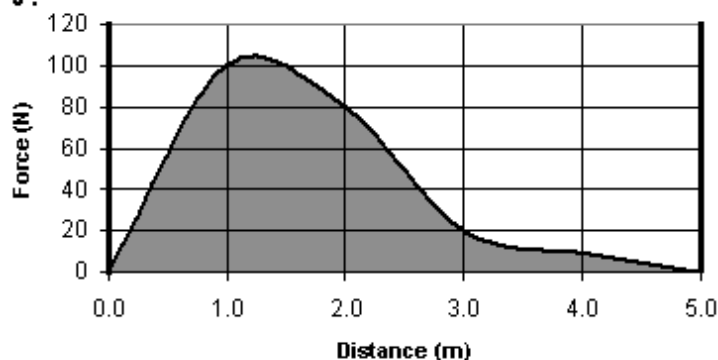
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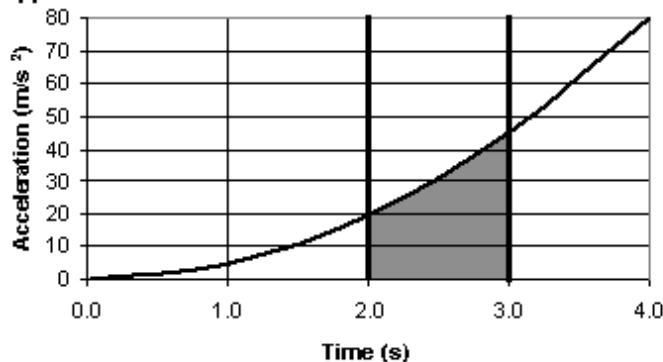
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For each of the following exercises, estimate the integral and indicate the variable it is equal to based on the units.

3.



4.



5.

