

# distance & displacement notes

Scalar  $\rightarrow$  a quantity with magnitude only

Vector  $\rightarrow$  a quantity with magnitude & direction

distance  $\rightarrow$  how far an object traveled. (meters)  
 $\hookrightarrow$  scalar

displacement  $\rightarrow$  how far you end up from where you started. (meters)  
 $\hookrightarrow$  Vector

Example: A man travels +80 m to the grocery store. He then turns around and goes -40 m to the gas station. Then he travels another -40 m home.

Total distance:  $80\text{m} + 40\text{m} + 40\text{m} = 160\text{m}$

Total displacement:

+80 m
-40 m
-40 m
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0 m