

Answer on Question #70955 – Math – Other

Question

Find the work done in moving an object along a vector $r = 3i + 2j - 5k$ if the applied force is $f = 2i - j - k$.

Solution

We shall apply the following formula:

$$W = \vec{r} \cdot \vec{f},$$

where the dot indicates the dot product.

Then

$$W = 3 \cdot 2 + 2 \cdot (-1) + (-5) \cdot (-1) = 9.$$

Reference:

Benjamin Aurispa, 2013. The Dot Product [viewed 13 November 2017]. Available from:
http://www.math.tamu.edu/~baurispa/math151/151ch1_2-3.pdf

Answer. 9.