Question#18728

a body of mass 5kg is displaced through a distance of 2m with uniform acceleration of 3ms-2 calculate work done

Solution:

The done work is:

$$A = FS\ ,\ were\ F - force\ due\ to\ the\ body, S - displacement$$

According to the Second Newton's Law:

$$F = ma, were\ m - mass, a - acceleration$$

$$\boldsymbol{A = maS = 5 * 3 * 2 = 30\ J}$$

Answer: 30 J