PHYS 211 Ch-7 In-Class Problem Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 

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As a particle moves along an *x* axis, a force in the positive direction of the axis acts on it. Figure [7-48](http://edugen.wiley.com/edugen/courses/crs4957/halliday9118/halliday9118c07/halliday9118/halliday9118c07/halliday9118c07xlinks.xform?id=halliday9118c07-fig-0048) shows the magnitude *F* of the force versus position *x* of the particle. The curve is given by *F* = *c*/*x*2, with constant *c* = 9.0 (SI). I. Express the SI unit of the constant *c*.II. Find the work done on the particle by the force as the particle moves from *x* = 1.0 m to *x* = 3.0 m by (a) estimating the work from the graph and (b) integrating the force function.

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| http://edugen.wiley.com/edugen/courses/crs4957/halliday9118/halliday9118c07/image_n/nt0048-y.gif |
| http://edugen.wiley.com/edugen/courses/crs4957/common/art/pixel.gif |

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