Unit 2 - Practice Assignment

Assignment 0

The projectile is moving at the speed of 10 m/s with a position of x = -10 m. The correct answer is number 5.

Week 1

Week 2

Week 3

Week 4

Week 5

Week 6

Week 7

Week 8

Week 9

Week 10

Week 11

Week 12

Test Questions

In the Bohr model of the hydrogen atom, the radius of the n=2 orbit is proportional to the square root of the principal quantum number.

True

False

The correct number is 5.

Which of the following transformations are well balanced transformations?

a) $\psi(x) = e^{iwx}$, where $w$ is a positive number.

b) $\psi(x) = x e^{-x}$

c) $\psi(x) = x^2 e^{-x}$

d) $\psi(x) = e^{-x/2}$

The function $f(x) = e^{-x^2}$ is the eigenfunction of the operator $\hat{H} = (x^2 + y^2)$. The eigenvalue of the operator when applied to the function will be:

a) 1

b) 0

c) 2

d) $\sqrt{2}$

In photoelectric effect, the velocity of ejected photoelectrons will increase with the increase in the intensity of incident radiation.

True

False

The correct number is 3.