phys 218ch 6. Irend , tare 2

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| the classical name equation: $\frac{\partial^2 \Psi(x,t)}{\partial x^2} = \frac{1}{2} \frac{\partial^2 \Psi(x,t)}{\partial t^2}$ |
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| the comble the democras. V(antitota) |
| $\frac{1}{2\pi}\left(\frac{34}{36} + \frac{1}{2}\frac{34}{36}\right) = -\frac{1}{2\pi}\left(\frac{34}{3x^2} + \frac{1}{2}\frac{34}{2x^2}\right) + 44(x,6)$ |
| 1 h a 2 4; + ih 10 2 42 = - th a 2 4 - th 2 2 2 4 Va 4 + Vb 42 |
| $\frac{1}{2} \ln \frac{3}{2} + \frac{1}{2} \ln \frac{3^{2} + 1}{3 \times 2} = \frac{3^{2} + 1}{2} \ln \frac{3^{2} + 1}{3 \times 2} + \frac{1}{2} \ln \frac{3^{2} + 1}{3 \times 2} + $ |
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| $\frac{\partial^{2}(x,t)}{\partial x} = i k A e^{i(kx - kx^{4})} = i k A$ |
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| $\frac{\partial^2 \Psi(x, \epsilon)}{\partial x^2} = i^2 \pi^2 \pi^2 = -\kappa^2 \pi^2$ |
| $\partial T(x, c) = c T(x, c) = $ |
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| $2m$ $E = h\delta = h\omega$ |
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| Probability interperentia: the probability P(x) dx of Sinding a purpose between x and x+dx |
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| $\frac{i\hbar \psi(x) \ \partial \delta(6) = -\hbar^2 \delta(6)}{\partial \epsilon} \frac{\partial^2 \psi(x)}{\partial x^2} + V(x) \psi(x) \delta(\epsilon)$ |
| dt 2m dx2 |
| divide by 4'(x) 8(4) |
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| $\frac{0h}{80t} \frac{36(t)}{3t} = -\frac{h^2}{2m} \frac{1}{\varphi(x)} \frac{3^2 \varphi(x)}{3x^2} + V(x)$ |
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| Compared to Blot bur time dependent (8" "") B = thw = E C = E (th J & Co) = E White important Thus When F Y(x) this is time to time independent School bing wome equation School bing wome equation School bing wome equation The probability density of # of = V(x) E continue F (x) E c | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | _ |
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| thus The see of this of the time interested that the first of the time interested the schooling wave equation Set) = ib for = e thus of the time interested the school of th | BEE | |
| thus $ \int \frac{Work \cdot Wporking}{\sqrt{h}} \frac{d^2 \psi(x)}{\sqrt{h}} \cdot V(x)\psi(x) = E \psi(x) / fhd \text{ is the time-independent} $ $ \int \frac{d^2 \psi(x)}{\sqrt{h}} \cdot V(x)\psi(x) = E \psi(x) / fhd \text{ is the time-independent} $ $ \int \frac{d^2 \psi(x)}{\sqrt{h}} \cdot V(x)\psi(x) = E \psi(x) / fhd \text{ is the time-independent} $ $ \int \frac{d^2 \psi(x)}{\sqrt{h}} \cdot V(x)\psi(x) = E \psi(x) / fhd \text{ is the time-independent} $ $ \int \frac{d^2 \psi(x)}{\sqrt{h}} \cdot V(x)\psi(x) = E \psi(x) / fhd \text{ is the time-independent} $ $ \int \frac{d^2 \psi(x)}{\sqrt{h}} \cdot V(x)\psi(x) = E \psi(x) / fhd \text{ is the time-independent} $ $ \int \frac{d^2 \psi(x)}{\sqrt{h}} \cdot V(x)\psi(x) = E \psi(x) / fhd \text{ is the time-independent} $ $ \int \frac{d^2 \psi(x)}{\sqrt{h}} \cdot V(x)\psi(x) = E \psi(x) / fhd \text{ is the time-independent} $ $ \int \frac{d^2 \psi(x)}{\sqrt{h}} \cdot V(x)\psi(x) = E \psi(x) / fhd \text{ is the time-independent} $ $ \int \frac{d^2 \psi(x)}{\sqrt{h}} \cdot V(x)\psi(x) = E \psi(x) / fhd \text{ is the time-independent} $ $ \int \frac{d^2 \psi(x)}{\sqrt{h}} \cdot V(x)\psi(x) = E \psi(x) / fhd \text{ is the time-independent} $ $ \int \frac{d^2 \psi(x)}{\sqrt{h}} \cdot V(x)\psi(x) = E \psi(x) / fhd \text{ is the time-independent} $ $ \int \frac{d^2 \psi(x)}{\sqrt{h}} \cdot V(x)\psi(x) = E \psi(x) / fhd \text{ is the time-independent} $ $ \int \frac{d^2 \psi(x)}{\sqrt{h}} \cdot V(x)\psi(x) = E \psi(x) / fhd \text{ is the time-independent} $ $ \int \frac{d^2 \psi(x)}{\sqrt{h}} \cdot V(x)\psi(x) = E \psi(x) / fhd \text{ is the time-independent} $ $ \int \frac{d^2 \psi(x)}{\sqrt{h}} \cdot V(x)\psi(x) = E \psi(x) / fhd \text{ is the time-independent} $ $ \int \frac{d^2 \psi(x)}{\sqrt{h}} \cdot V(x)\psi(x) = E \psi(x) / fhd \text{ is the time-independent} $ $ \int \frac{d^2 \psi(x)}{\sqrt{h}} \cdot V(x)\psi(x) = E \psi(x) / fhd \text{ is the time-independent} $ $ \int \frac{d^2 \psi(x)}{\sqrt{h}} \cdot V(x)\psi(x) = E \psi(x) / fhd \text{ is the time-independent} $ $ \int \frac{d^2 \psi(x)}{\sqrt{h}} \cdot V(x)\psi(x) = E \psi(x) / fhd \text{ is the time-independent} $ $ \int \frac{d^2 \psi(x)}{\sqrt{h}} \cdot V(x)\psi(x) = E \psi(x) / fhd \text{ is the time-independent} $ | | |
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| $\frac{1-h^2}{2m}\frac{d^2\psi(x)}{dx^2}+V(x)\psi(x)=E\psi(x)/fh0 \text{ is the time-independent}$ $\frac{1}{3chvoling}\text{ wore equation}$ $\frac{1}{3chvoling}\text{ wore equation}$ $\frac{1}{3chvoling}\text{ wore equation}$ | Man () Man a (| |
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| $S(t) = e^{-i\beta + i\beta} = e^{-i\omega + \delta}$ Thus $\psi(x, t) = \psi(x) e^{-i\omega + \delta}$ | | |
| $S(t) = e^{-i\beta + i\beta} = e^{-i\omega + \delta}$ Thus $\psi(x, t) = \psi(x) e^{-i\omega + \delta}$ | | |
| $S(t) = e^{-i\beta + i\beta} = e^{-i\omega + \delta}$ Thus $\psi(x, t) = \psi(x) e^{-i\omega + \delta}$ | - h d y(x) Wx) = F y(x) / tho is the time - independence | |
| $S(t) = e^{-i\beta + i\beta} = e^{-i\omega + \delta}$ Thus $\psi(x, t) = \psi(x) e^{-i\omega + \delta}$ | 2m dx2 schroeding wore equation | |
| $S(t) = e^{-i\beta + i\beta} = e^{-i\omega + \delta}$ Thus $\psi(x, t) = \psi(x) e^{-i\omega + \delta}$ | | |
| | | |
| | S(+)==000/n=e Thus V(x+1=WX)e-cure | |
| | 0.00 | |
| the probability density of * $\gamma = V^2(x)(e^{i\omega x}e^{-i\omega x}) = V^2(x)$ where the proposition is not time dependent the probability distributions time and depends only on problem | minimum and a second | |
| the probability density of * open = \$\psi^2(x)(e^{iw \delta}e^{-iw \delta}) = \psi^2(x) where the proportion is not the dependent the probability distinct is constant in time and depend only on probability for the probability density of the probability distinct in the probability density of the probability distinct in the probability density of the probability density densit | | - |
| where the progressian is not time dependent the probability distribution of time and depends only on postolar | 6/2 prob 1/1/4 1 11 pr * no - 1/2/x/(00006 -0000) = 1/2/x/ | - |
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| $N_1 + N_2 + \cdots + N_i$ $\sum_{i=1}^{n} N_i + \sum_{i=1}^{n} d_i + \sum_{i=1$ |
| $= \int_{-\infty}^{\infty} \left(x / dx \right) dx$ |
| $\int_{-\infty}^{\infty} P(x) dx = \Psi^*(x, \epsilon) \Psi(x, \epsilon) dx$ |
| (x)= -00 (x) this is the normalization |
| Some *(x, e) of (x, e) eccords on 1) =1 |
| (x) = (x Y (x, x) + (x, x) + (x, x) dx |
| The procedure can be used to the the |
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| 13 00 | opened: -it 2 | il an opered | on the Eretion | 4-(x, E) |
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| pis the | womenous operator - | in a and tin | 3 m(x,0) = 6m | (x, E) |
| | | ∂x | ∂ _× | 1 |
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| every physical al | bremble has an oppre | so red to comp | re the expecten | tha ! |
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| 2 = cn+bi a and b are conjume ran number |
|--|
| 2 - SIT Of CARE O CAPE CONTOURS |
| |
| Ξ=a-bi |
| |
| Z==(a+bi)(a-bi) = a2 +abi-abi+ib = a2+0+(-1)b2 = a2-b2 |
| |
| 2 = (a+bi)(a-bi) = 2 = = a2-b2 |
| = = (a+6.)(4-6.) -22 = a-0 |
| |
| # K = a+b; = 8+(0)i |
| |
| K*K= (8+0c)(8-0c) = 8×8=82=K2 |
| |
| So the expansion who of p is |
| of the charge of the |
| (10) = - + (** (x, +) 2~ (x, +) |
| /(p) = -it (x,t) 22 (x,t) 2x |
| * 0* |
| |
| take the time demotion |
| |
| $\frac{\partial \psi}{\partial t} = \frac{\partial \varepsilon}{\partial t} = \frac{\partial \varepsilon}{\partial t} = -i\omega \theta$ = $-i\omega \theta$ = $-i\omega \psi$ |
| 7€ 7€ |
| |
| |
| w= E/k became E=wk = energy opener= it ? |
| θε 1 |
| E (40),6) = (h) 40,6) |
| 7- 3- 3- |
| / |
| (E) = it (m+(x,6) 24(x,6) ic) |
| 22 |
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2.4