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4.5 Comparison of the variation of $T$ as a function of energy $E$ generated by BW type formula (4.40) with the exact $T (EX)$ obtained from numerical computation. The potential used is given by Eq.(4.21). The potential parameters are $V_0 = 8$, $a = 3$, $c = 0.3$. The peaks of $T$ indicates the QB states.  

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4.9 Variation of $T_{qt}$ as a function of below barrier energy $E(2.5−8.0)$ shows peaks at QB state energies for the potential given by Eq.(4.19). The potential parameters are $V_0 = 8$, $a = 3$, $b = 3.5$.

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5.1 Variation of $T$ and $R$ across a rectangular barrier (indicated by B) ($V_0 = 5$, $a = 2$) and corresponding well (W) as a function of $E$. In this and rest of the figures potential strengths and $E$ are in $fm^{-2}$ units and $a$ in $fm$ units.

5.2 Comparative behaviour of coefficient of transmission ($T$), reflection ($R$) and absorption ($A_b$) as a function of energy ($E$) in the case of an absorptive barrier ($V_0 = 5$, $W_0 = 5$, $a = 1.5$) and absorptive well ($V_0 = −5$, $W_0 = 5$, $a = 1.5$).

5.3 The variation of the absorption $A_b$, transmission $T$, and reflection $R$ coefficients as a function of absorption strength $W_0$ for energy $E = 4$ indicating the gradual dominance of $R$ for large $W_0$ for $E = 3$. 
5.4 The variation of the absorption \( A_b \), transmission \( T \), and reflection \( R \) coefficients as a function of the absorption strength \( W_0 \) for energy \( E = 4 \) indicating the gradual dominance of \( R \) for large \( W_0 \). For \( E = 4 \), \( T \) becomes practically zero when \( W_0 > 12 \).

5.5 Variation of the coefficients \( A_b \), \( T \), and \( R \) as a function of the energy \( E \) for an absorptive potential with \( V_0 = 0, W_0 = 3, a = 1.5 \). The lowest value of the energy is \( E = 0 \).

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6.1 Variation of the differential cross section \( \sigma(\theta) \) as a function of \( \theta \) for energies \( k^2 = 4 \) and \( k^2 = 36 \) for a hard core potential of radius \( a \).

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