

4.3: $A_2 = 0$

In this case $A_1 = -B_3$, and the relation between k and κ is modified to

$$ka = -\kappa a \cot \kappa a. \quad (4.3.1)$$

From the graphical solution, in Figure 4.3.1 we see that this type of solution only occurs for $\kappa_0 a$ greater than $\pi/2$.

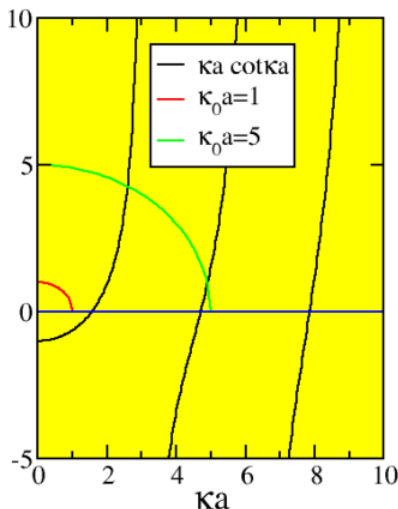


Figure 4.3.1: The graphical solution for the odd states of the square well.

In the middle region all these solutions behave like sines, and you will be asked to show that the solutions turn into minus themselves when x goes to $-x$. (We say that these functions are odd.)

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