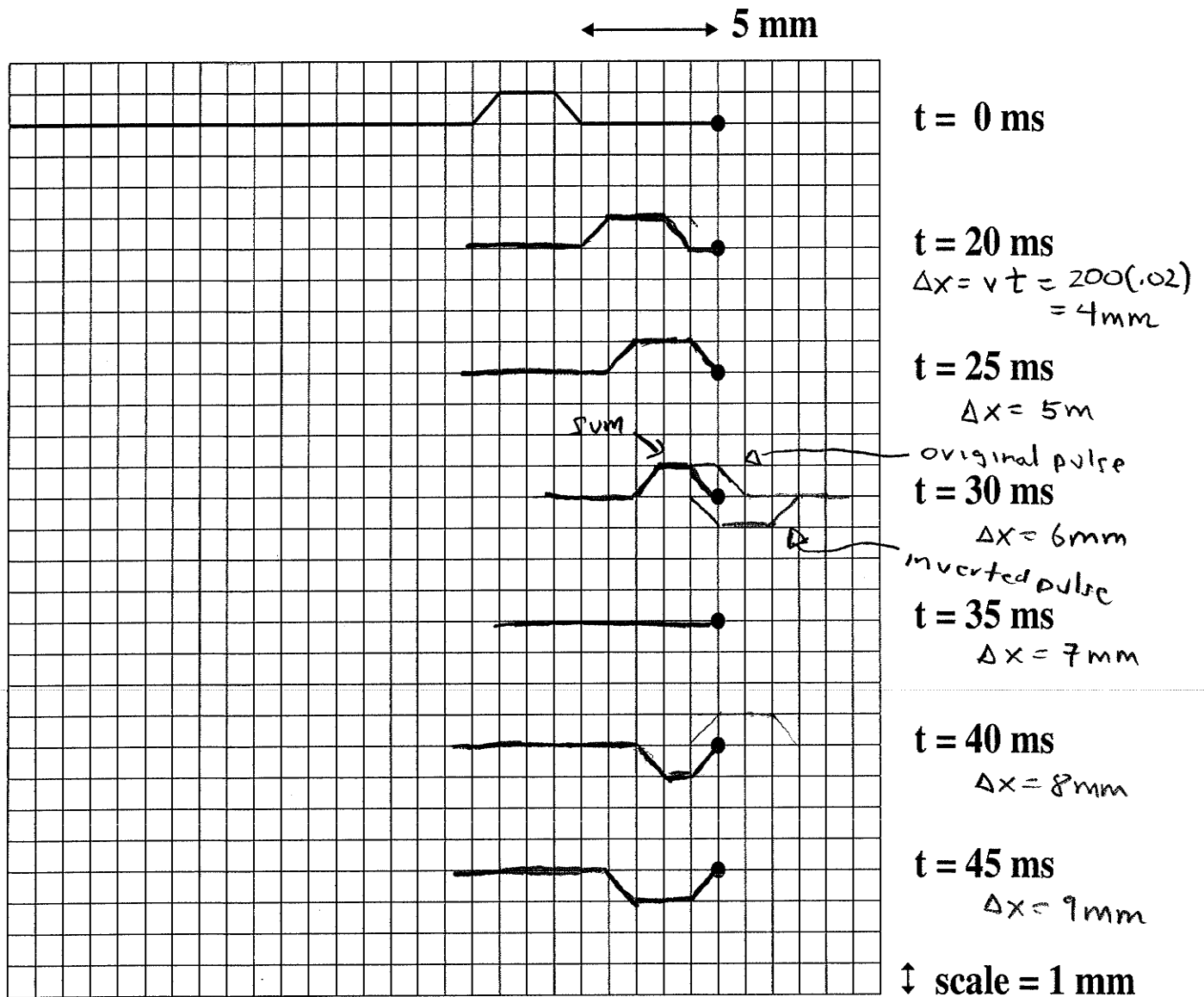


KEY

Physics 9B, Fall 2013, Quiz 2

At $t = 0$ a wave pulse on a string has the dimensions shown in the figure. The speed of the wave is 200 mm/s to the right. If point O is a fixed end, draw the total wave on the string at $t = 20, 25, 30, 35, 40, 45 \text{ ms}$. Use the gridded space provided to draw your figures accurately. The edge of each grid box is 1 mm . **IMPORTANT:** Explain briefly (at the bottom of the page) the basic principle you are using in your answer, and, for the case of $t = 30 \text{ ms}$, show how this principle is allowing you to get your final answer by drawing an appropriate diagram.



The basic principle is superposition and the construction of an inverted pulse moving forwards the left which keep point O always at zero displacement.