Chapter 14

Applications of Differentiation

Table 14-1: Solution to Example 11(c)

Condition	Behaviour
$\boldsymbol{x \ll -1.65}$	At this instant, $-2x^3$ becomes the dominant term of $y = -2x^3 - x^2 + 13x - 6$. The cube of a negative value is negative; hence we have $-2(negative) = positive = y$. In other words, the function remains positive above the horizontal axis.
$\boldsymbol{x \gg 1.31}$	At this instant, again $-2x^3$ dominates. The cube of a positive value is positive; hence we have $-2(positive) = negative = y$. In other words, the function remains negative below the horizontal axis.

Thank You