

- 39** (a) The point (1984, 1225) means that in the year 1984, the average cost of tuition and fees was \$1,225. The point (1987, 1621) means that in the year 1987, the average cost of tuition and fees was \$1,621.
- (b) First, we must find the slope of the line. $m = \frac{1621 - 1225}{1987 - 1984} = 132$. Using the slope-intercept form for the equation of a line and the point (1984, 1225), $y = 132(x - 1984) + 1225$. The slope of 132 means that the average cost of tuition and fees at public colleges has risen by approximately \$132 each year.
- (c) From the graph, when $y = 2000$, then $x \approx 1990$. Using a symbolic approach, when $y = 2000$, then $132(x - 1984) + 1225 = 2000 \Rightarrow x - 1984 = \frac{775}{132} \Rightarrow x \approx 1989.87$. Rounded to the nearest year, the answer is 1990.