

## Exercise 39

For the following exercises, consider the data in Table 5, which shows the percent of unemployed in a city of people 25 years or older who are college graduates is given below, by year.

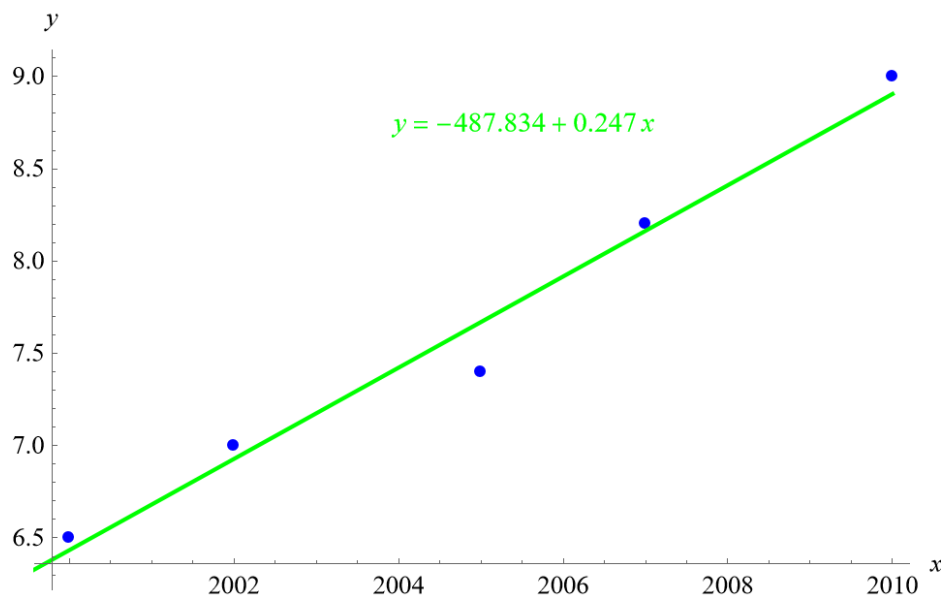
Year	2000	2002	2005	2007	2010
Percent Graduates	6.5	7.0	7.4	8.2	9.0

Table 5

In what year will the percentage exceed 12%?

### Solution

Plot the following points: (2000, 6.5), (2002, 7.0), (2005, 7.4), (2007, 8.2), and (2010, 9.0).



Mathematica's FindFit function gives

$$y = -487.834 + 0.247x$$

for the line of best fit. Set  $y = 12$  and solve the equation for  $x$ .

$$12 = -487.834 + 0.247x$$

$$499.834 = 0.247x$$

$$x = \frac{499.834}{0.247} \approx 2023.62$$

The percentage of unemployed college graduates will reach 12% after the middle of 2023.

This answer is in disagreement with the one at the back of the book.