

Exercise 29

For the following exercises, use Table 4, which shows the percent of unemployed persons 25 years or older who are college graduates in a particular city, by year.

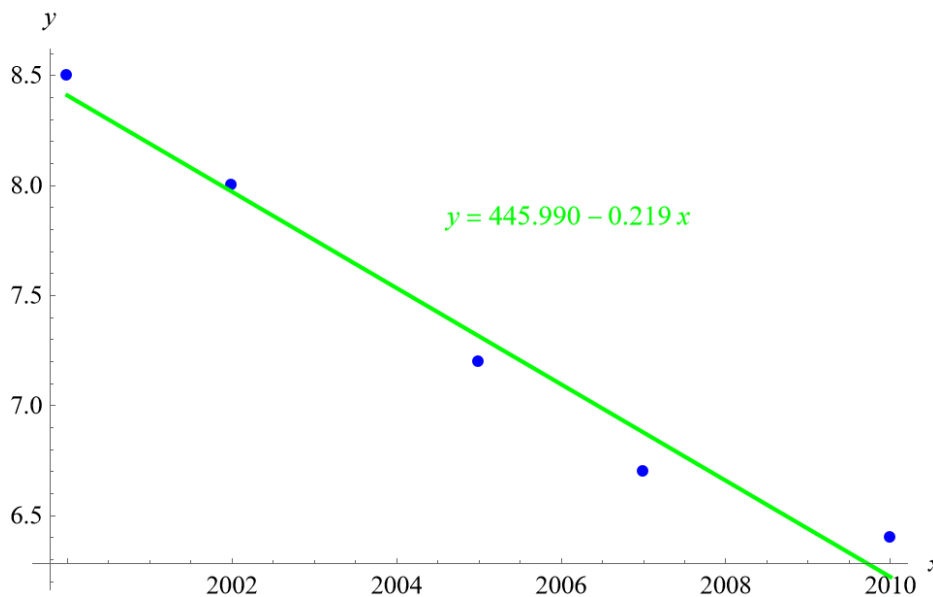
Year	2000	2002	2005	2007	2010
Percent Graduates	8.5	8.0	7.2	6.7	6.4

Table 4

In what year will the percentage drop below 4%?

Solution

Draw the following points on a graph: (2000, 8.5), (2002, 8.0), (2005, 7.2), (2007, 6.7), and (2010, 6.4).



Mathematica's FindFit function gives

$$y = 445.990 - 0.219x$$

as the line that best fits the data. Set $y = 4$ and solve the equation for x .

$$4 = 445.990 - 0.219x$$

$$-441.99 = -0.219x$$

$$x = \frac{441.99}{0.219} \approx 2018.22$$

A little after the start of 2018 the percentage will drop below 4 percent.