A student set up an experiment to investigate the relationship between the temperature of an acid and the rate of carbon dioxide production when reacted with a base. In each trial the student timed how long in seconds it took to produce 100 mL of carbon dioxide in a gas syringe. The results are shown below.

Temperature of acid (°C)	Time taken to produce 100 mL of carbon dioxide (s)
30	91
40	65
50	64
60	21

13. Which of the following statements **best** describes the relationship between the dependent and independent variables?

(a) The volume of carbon dioxide is decreased as the temperature decreases.
(b) As the temperature of the acid increases, the time taken to produce 100 mL of carbon dioxide decreases.
(c) The rate at which carbon dioxide is produced decreases as the temperature increases.
(d) The change in temperature has no effect on the rate of production of carbon dioxide.