



3. The volume ( $V$ ) of a given mass of helium varies directly with its temperature ( $T$ ), and inversely with its pressure ( $P$ ). The equation that represents this relationship is given by

where  $k$  is a helium constant. If a given amount of helium occupies a volume of 189 liters when the temperature is  $20^\circ\text{C}$  and the pressure is 121,000 Pascals, what is the volume of the helium when the temperature is  $10^\circ\text{C}$  and the pressure is 100,000 Pascals? Round your answer to the nearest tenth.

- A. 114.3 liters
- B. 121.7 liters
- C.