

Question

Melissa is driving along a straight road from Dallas, Texas to Oklahoma City, Oklahoma at a constant velocity. Every increase of ten minutes in the number of minutes x since passing the state line, her distance y from Oklahoma City decreases by 7 miles.

Select each of the true statements from the following:

Answerlist

- $\Delta y = \frac{7}{10} \Delta x$
- $\Delta y = \frac{10}{7} \Delta x$
- $\Delta y = -\frac{7}{10} \Delta x$

Solution

Answerlist

- False. For $\Delta x = 10$ we have $\Delta y = 7$ but her distance y decreases which means the rate should be negative.
- False. Her distance y decreases which means the rate is negative. Furthermore, for $\Delta x = 10$ we have $\Delta y = \frac{100}{7}$ which is not equal to 7
- True. Her distance y decreases which means the rate is negative and for $\Delta x = 10$ we have $\Delta y = 7$.

Meta-information

extype: mchoice exsolution: 001 exname: ConstantRateOfChange