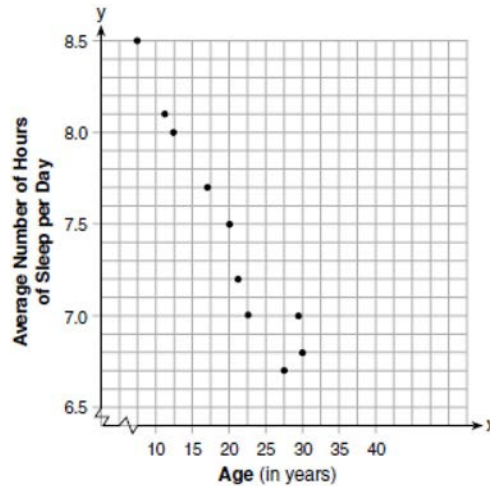


S.ID.C.7: Modeling Linear Functions

1 A student plotted the data from a sleep study as shown in the graph below.



The student used the equation of the line $y = -0.09x + 9.24$ to model the data. What does the rate of change represent in terms of these data?

- | | |
|--|---|
| 1) The average number of hours of sleep per day increases 0.09 hour per year of age. | 3) The average number of hours of sleep per day increases 9.24 hours per year of age. |
| 2) The average number of hours of sleep per day decreases 0.09 hour per year of age. | 4) The average number of hours of sleep per day decreases 9.24 hours per year of age. |

2 During a recent snowstorm in Red Hook, NY, Jaime noted that there were 4 inches of snow on the ground at 3:00 p.m., and there were 6 inches of snow on the ground at 7:00 p.m. If she were to graph these data, what does the slope of the line connecting these two points represent in the context of this problem?

S.ID.C.7: Modeling Linear Functions
Answer Section

1 ANS: 2 REF: 061704ai

2 ANS:
2 inches of snow every 4 hours.

REF: 061630ai