

QUIZ 1

Name _____

1. Calculate the average rate of change of $q(x) = \sqrt{x+2}$ on the interval $[0, 6]$.

2. Calculate the average rate of change in the temperature between 11:00am and 3:00pm.

| Time of Day | Temperature ($^{\circ}\text{F}$) |
|-------------|------------------------------------|
| 11:00am | 68 |
| 1:00pm | 73 |
| 3:00pm | 75 |

3. Use the difference quotient $\frac{f(a+h) - f(a)}{h}$ with $h = .1$ and $h = .01$ to estimate the instantaneous rate of change of $f(x) = 5x - x^2$ at $x = -1$.