4) Base your answer to the following question on the topographic map below. Elevations are in feet. Point A and B are locations on the map.


What is the gradient along the straight line between points A and B ?
A) $10 \mathrm{ft} / \mathrm{mi}$
B) $20 \mathrm{ft} / \mathrm{mi}$
C) $25 \mathrm{ft} / \mathrm{mi}$
D) $35 \mathrm{ft} / \mathrm{mi}$
5) A stream has a source at an elevation of 1,000 . meters. It ends in a lake that has an elevation of 300 . meters. If the lake is 200. kilometers away from the source, what is the average gradient of the stream?
A) $1.5 \mathrm{~m} / \mathrm{km}$
B) $3.5 \mathrm{~m} / \mathrm{km}$
C) $10 . \mathrm{m} / \mathrm{km}$
D) $15 \mathrm{~m} / \mathrm{km}$
6) Base your answer to the following question on the topographic map below. Points $X$ and $Y$ are locations on Squab Hollow Creek.

$\begin{array}{rlllllllllll}\text { kilometers } 0 & 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 \\ & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1\end{array}$
Determine the gradient of Squab Hollow Creek between point $X$ and point $Y$ by following the directions below.
$a$ Write the equation used to determine the gradient.
$b$ Substitute values into the equation.
$c$ Solve the equation and label the answer with the correct units.

