Skill 6 (Average Rate of Change) Lesson Examples

| Key Term | Definition |
| :---: | :---: |
| Average Rate of Change (Slope) | Given $\left(x_{1}, x_{2}\right)$ and $\left(y_{1}, y_{2}\right)$, then $m=\frac{\Delta y}{\Delta x}=\frac{y_{2}-y_{1}}{x_{2}-x_{1}}$ |

(S6a) Slope: Find the slope of the line passing through each pair of points or state that the slope is undefined. Then indicate whether the line through the points rises, falls, is horizontal, or is vertical.
A) $(4,-1)$ and $(-8,3)$
B) $(-3,-5)$ and $(-3,2)$
(S6b) Average Rate of Change: Find the average rate of change of each equation.
C) $y=x^{2}-2 x$ from $x=3$ to $x=6$
D) $y=12 x^{2}$ from $x=3$ to $x=3.5$
(S6b) Average Rate of Change: Find the rate of change between the following points on the graph.

E) Point $A$ to Point $B$
F) Point B to Point C

