10. \( f(x) = 7 \)  
\[ f'(x) = \frac{x-4}{x-y} \Rightarrow x = 2, 4 \]

\[ f'(x) \]

\[ f'(0) = \frac{0-2}{0-y} = \frac{-2}{-y} = \frac{2}{y} \]
\[ f'(3) = \frac{3-2}{3-y} = \frac{1}{3-y} \]
\[ f'(5) = \frac{5-2}{5-y} = \frac{3}{5-y} \]

\[ f(x) \text{ is increasing for } x \text{ in } (-\infty, 2) \text{ and } x \text{ in } (4, +\infty) \]
\[ f(x) \text{ is decreasing for } x \text{ in } (2, 4) \]

(3)