1. [12 points]
For the following statements, select True if the statement is *ALWAYS* true, and select False otherwise. No explanations are required.

a. [2 points]
If \( f \) is a differentiable function and \( \frac{f(5.1) - f(5)}{0.1} = -3 \),
then \( f'(5) = -3 \).

True \hspace{1cm} False

b. [2 points]
If \( g \) is a continuous function, then
\[
\int_{1}^{20} g(x) \, dx = \int_{1}^{100} g(x) \, dx + \int_{-100}^{20} g(x) \, dx.
\]

True \hspace{1cm} False

c. [2 points]
If \( h \) is an odd function and is continuous everywhere, then \( h \) is invertible.

True \hspace{1cm} False

d. [2 points]
If \( k \) is a differentiable function and is always concave up,
then \( k'(a) \leq \frac{k(b) - k(a)}{b - a} \) whenever \( a < b \).

True \hspace{1cm} False

e. [2 points]
If \( \ell \) is a continuous function, then
\[
\int_{2}^{3} \ell(t) \, dt \leq \int_{2}^{4} \ell(t) \, dt.
\]

True \hspace{1cm} False

f. [2 points]
Suppose \( m \) is a twice differentiable function. If \( m''(5) = 0 \),
then \( m \) does not have an inflection point at \( x = 5 \).

True \hspace{1cm} False