1. Let $f$ be a differentiable function such that $f(2)=12, f(5)=10, f^{\prime}(2)=-7$ and $f^{\prime}(5)=4$.
The function $g$ is differentiable and $\mathrm{g}(\mathrm{x})=\mathrm{f}^{-1}(\mathrm{x})$ for all x . What is the value of $g^{\prime}(12)$ ?
$\begin{array}{llll}\text { a) }-1 / 7 & \text { b) }-1 / 2 & \text { c) } 1 / 4 & \text { d) } 1 / 9\end{array}$
e) The value of $g^{\prime}(12)$ cannot be determined
2. Let $f$ be a differentiable function such that $f(2)=12, f(5)=10, f^{\prime}(2)=-7$ and $f^{\prime}(5)=4$.
The function $g$ is differentiable and $\mathrm{g}(\mathrm{x})=\mathrm{f}^{-1}(\mathrm{x})$ for all x . What is the value of $g^{\prime}(10)$ ?
$\begin{array}{llll}\text { a) }-1 / 7 & \text { b) }-1 / 2 & \text { c) } 1 / 4 & \text { d) } 1 / 9\end{array}$
e) The value of $g^{\prime}(10)$ cannot be determined
3. Let $f$ be a differentiable function such that $f(3)=11, f(12)=6, f^{\prime}(3)=9$ and
$f^{\prime}(12)=-2$.
The function $g$ is differentiable and $\mathrm{g}(\mathrm{x})=\mathrm{f}^{-1}(\mathrm{x})$ for all x . What is the value of $g^{\prime}(11)$ ?
$\begin{array}{llll}\text { a) }-1 / 7 & \text { b) }-1 / 2 & \text { c) } 1 / 4 & \text { d) } 1 / 9\end{array}$
e) The value of $g^{\prime}(11)$ cannot be determined
4. Let $f$ be a differentiable function such that $f(3)=11, f(12)=6, f^{\prime}(3)=9$ and
$f^{\prime}(12)=-2$.
The function $g$ is differentiable and $\mathrm{g}(\mathrm{x})=\mathrm{f}^{-1}(\mathrm{x})$ for all x . What is the value of $g^{\prime}(6)$ ?
$\begin{array}{llll}\text { a) }-1 / 7 & \text { b) }-1 / 2 & \text { c) } 1 / 4 & \text { d) } 1 / 9\end{array}$
e) The value of $g^{\prime}(6)$ cannot be determined
5. If $f(3)=-1, \mathrm{f}^{\prime}(3)=\frac{6}{5}$, and $\mathrm{g}(\mathrm{x})=\mathrm{f}^{-1}(x)$,
what is the equation of the tangent line to $\mathrm{g}(\mathrm{x})$
at $\mathrm{x}=-1$ ?
A) $y+3=\frac{-6}{5}(x-1)$

$$
\text { B) } y-3=\frac{6}{5}(x-1)
$$

C) $y+1=\frac{5}{6}(x-3)$
D) $y-3=\frac{5}{6}(x+1)$
E) $y+3=\frac{-5}{6}(x-1)$
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$$
\begin{aligned}
& \text { B) } y-3=\frac{-6}{5}(x+1) \\
& \text { D) } y+1=\frac{-6}{5}(x-3)
\end{aligned}
$$

C) $y-3=\frac{5}{6}(\mathrm{x}-1)$
E) $y+3=\frac{-5}{6}(x-1)$
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