Name: _____

Clear your desk of everything except pens, pencils and erasers. **Show all your work.**
If you have a question raise your hand and I will come to you.

1. [6 points] Given the function $f(x) = 4(x-2)^2 + 6$, for $x \leq 2$, find
a). The inverse function $f^{-1}(x)$;
b). The domain of $f^{-1}(x)$.

2. [4 points] Suppose f is a continuous one-to-one function, and given below are a few values of f and its derivative f^{-1}:

$$\begin{aligned} f(0) &= 1; \quad f'(0) = 0; \\ f(1) &= 2; \quad f'(1) = 2; \\ f(2) &= 5; \quad f'(2) = 4. \end{aligned}$$

Find

$$\left(f^{-1}\right)'(5).$$