1) A $1600-\mathrm{lb}$ elevator is suspended by a $200-\mathrm{ft}$ cable that weighs $10 \mathrm{lb} / \mathrm{ft}$. How much work is required to raise the elevator from the basement to the third floor, a distance of 30 ft ?.
2) Let $f(x)=x^{5}+x^{3}+x$. Assume that this function is one-to-one. Determine $\left(f^{-1}\right)^{\prime}(-3)$.
