Let $f(x)=x^{2}-x$.

1. Use the formal definition of the derivative to find the following exactly:
(a) $f^{\prime}(0)$
(b) $f^{\prime}(1)$
(c) $f^{\prime}(-1)$
2. Now use the formal definition of the derivative to find a formula for $f^{\prime}(x)$.
