If Restriction Then Which Substitution

1. If y is a positive even integer, then which of the following must be true?

(A) $1 - y$ is positive
(B) $1 - y$ is even
(C) $(y+1)^y$ is even
(D) $3(y - 1)$ is even
(E) $2y - y$ is positive

2. If p and q are positive integers, and $p > q$ then which of the following must have the least value?

(A) $\frac{p}{p-q}$
(B) $q - (p - 1)$
(C) $\frac{q}{p}$
(D) $(q-p)(p-q)$
(E) $\frac{q-p}{p}$

3. Assuming $0 < f < 1$, then which of the following express the relationship between $\frac{1}{f}, f$ and f^2.

(A) $\frac{1}{f} < f < f^2$
(B) $f < \frac{1}{f} < f^2$
(C) $f < f^2 < \frac{1}{f}$
(D) $f^2 < f < \frac{1}{f}$
(E) $\frac{1}{f} < f^2 < f$

4. If m and n are even integers, then which of the following must be an odd integer?

I. $(m-1)n$
II. $(m+1)-n$
III. $mn - m$

(A) None of the Above
(B) I
(C) II
(D) I and II
(E) I and III