1. Identify the hypothesis or conclusion as requested for each statement below. Remember that each must itself be a complete, grammatically correct sentence.

(a) The number $a^2$ is even if $a$ is even.

Hypothesis:

(b) $ab > 0$ implies that $|a + b| = |a| + |b|$.

Conclusion:

(c) $a^2$ is only a multiple of $b^2$ if $a$ is a multiple of $b$.

Hypothesis:

(d) $a^3 < b^3$ is a necessary condition for $a$ to be less than $b$.

Conclusion:

(e) For $ac$ to be less than $bc$, it is sufficient that $a < b$ and $c > 0$.

Hypothesis:

(f) $ac$ is even whenever at least one of $a$ or $c$ is even.

Conclusion:
2. Refer to your answers to Problem #1 to write the requested variations of each statement below. Phrase your responses in the simplest language possible.

(a) $a$ is a multiple of $b^2$ only if $a$ is a multiple of $b$.
   “If-then” form:

   Negation:

   Converse:

(b) Having $a = -2b$ or $b = -2a$ implies that $|a + b| \leq |a| + |b|$.
   “If-then” form:

   Negation:

   Contrapositive:

(c) $a < b$ and $c > 0$ are sufficient conditions for $ac$ to be less than $bc$.
   “If-then” form:

   Negation:

   Inverse: