1. Identify the antecedent and consequent for each of the following conditional statements. Do not worry about whether anything is true or false!

(a) If $x > 3$ then $x^2 > 9$.
   Antecedent:
   Consequent:

(b) 2 divides $a$ only if 2 divides $10a$.
   Antecedent:
   Consequent:

(c) For $f(x)$ to be continuous it is sufficient for $f(x)$ to be differentiable.
   Antecedent:
   Consequent:

(d) The sequence $a_n$ is bounded whenever $a_n$ converges.
   Antecedent:
   Consequent:

2. Fill in the truth table which shows that $P \rightarrow (Q \rightarrow R) \equiv (P \land Q) \rightarrow R$:

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NAME:

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3. Write down the converse and the contrapositive of each of the following. Try to make these as coherent as possible: Do not worry about whether anything is true or false!

(a) If \( n \) is even then \( n \) is not odd.
   
   Converse:
   
   Contrapositive:

(b) If Alejandro gets an \( A \) then Amanda smiles and Charles doesn’t jump.
   
   Converse:
   
   Contrapositive:

(c) If \( x > 2.1 \) and \( x \) is an integer then \( x \geq 3 \).
   
   Converse:
   
   Contrapositive: