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a) Xanadu has an absolute advantage since it can produce 40 tractors while Atlantis only 10.

b) Atlantis has a comparative advantage since it only gives up 10 tractors to produce 30 cars or \( \frac{3}{5} \) of a tractor for every car it makes while Xanadu gives up 2 tractors for every car it makes.

c) Xanadu will import cars because it has a comparative advantage in tractor production while Atlantis has one in car production. When the two trade, they both become more efficient.

d) Atlantis will benefit because it can produce 30 cars, trade 10 for tractors and come out with 20 tractors while if it had tried to produce 10 tractors of its own, it would not be able to produce any cars. It is simply more efficient to trade.
3. Xanadu has a comparative advantage in the production of tractors because it only costs them \( \frac{1}{2} \) of a car to produce compared to Atlantis where 1 Tractor costs 3 cars to produce.

b. Atlantis has a comparative advantage in the production of cars because their opportunity cost for 1 car is only \( \frac{1}{3} \) of a Tractor while Xanadu's opportunity cost for 1 car is 2 Tractors.

c. Xanadu will import cars because they have a comparative advantage in tractors.

d. Atlantis' opportunity cost for cars is lower per Tractor (\( \frac{1}{3} \)) than Xanadu's opportunity cost for Tractors per car (\( \frac{1}{2} \)). Detailed below:

\[
\begin{align*}
\text{AT: } & 1 \text{ Car} = \frac{1}{3} \text{ Tractor} \\
\text{XA: } & 1 \text{ Tractor} = \frac{1}{2} \text{ Car}
\end{align*}
\]