

3. (a) If the agriculture department behaved as a spender the net benefits would depend on how it viewed the various impacts of the tariff. There are several possibilities:

- **The \$8 million tariff revenue:** The department might view the \$8 million tariff revenue as a benefit if it cares about the treasury (another government department) but not the welfare of domestic consumers (the tariff revenue is income taken from domestic consumers). On the other hand, if the department didn't care about the treasury or domestic consumers, the \$8 million would be neither a cost or benefit. Although it's unclear if the department would view increases in treasury income as benefit, I would argue it would probably ignore the increased prices paid by domestic consumers since growers are the primary constituency.
- **The \$13 million in foregone domestic consumption:** A spender would probably ignore the \$13 million in foregone domestic consumption since growers are the primary constituency.
- **The \$6 million of additional resources devoted to domestic kumquat production:** A spender might treat the additional resources devoted to domestic kumquat production as a cost. At the same time, a spender might consider the \$6 million as benefit if it thought of labour in the kumquat industry as a constituent group. However, since the question implies that the growers are the primary constituency, I would lean towards the view that a spender would only treat the \$6 million as a cost.
- **The \$4 million increase in domestic grower profits:** The department would view the \$4 million increase in domestic grower profits as a benefit because domestic growers are its primary constituents.

The table below presents the four possibilities (P1, P2, P3 and P4) based on above reasoning. "B" indicates the impact has been interpreted as a benefit; "C" indicates the impact has been interpreted as a cost; "C&B" indicates the impact has been interpreted as both a cost and a benefit; and "N" indicates the impact has been interpreted as neither a cost nor benefit.

Impact	P1	P2	P3	P4
\$8M tariff revenue	B	N	B	N
\$13M foregone domestic consumption	N	N	N	N
\$6M production resources	C	C	C&B	C&B
\$4M domestic grower profit	B	B	B	B
Net Benefits	+\$6M	-\$2M	+\$12M	+\$4M

(b) If the treasury department behaved as if it were a guardian, then it would count only the costs and benefits accruing to the government. If so, benefits would equal \$8.8 million; i.e., \$8 million in tariff revenue plus \$0.8 million of tax revenues (20% of the \$4 million in profits tax). Costs would be zero. So net benefits would equal \$8.8 million.