

1. In your own words, what is a dominated option? State part I of the canonical form theorem and give an example. Give an example.

2. In your own words, what is a reversible option? State part II of the canonical form theorem and give an example. Give an example.

3. Explain each step: show all work. (hint: canonical form, dominated options)

$$\{1, 2 \mid 3\} = \{2 \mid 3\} = 5/2$$

$$\{*, 1 * \mid -5\} = \{1 * \mid -5\}$$

$$\{*, \uparrow, 1 \mid -1\} = \{1 \mid -1\} = \pm 1$$

$$\{-1 \mid 1\} = 0$$

$$\{0, * \mid 0, \downarrow\} = \{0, * \mid \downarrow\}$$

4. Explain each step: show all work. (hint: canonical form, reversible options)

$$\{* \mid \uparrow, *\} = 0$$

$$\{0, * \mid *\} = \uparrow$$

$$\{\uparrow \mid \downarrow\} = *$$

$$\{\downarrow \mid \uparrow\} = 0$$

$$\uparrow = \{\uparrow \mid \uparrow *\} \text{ (easy)}$$

$$\uparrow * = \{\uparrow, \uparrow * \mid \uparrow, \uparrow\} \text{ (easy)} = \{0 \mid \uparrow\}$$

5. Carefully, explain what is wrong with this statement: by part II of the canonical form theorem (reversing reversible options), $\{0, * \mid *\} = \{0 \mid *\}$ and $\{0, * \mid \downarrow\} = \{0 \mid \downarrow\}$.