1. Recall Conway’s definition of game sum: \( G + H = \{ G^L + H, G + H^L | G^R + H, G + H^R \} \).
   In this notation, what does \( G^L + H \) mean? Answer in your own words. Also answer by assuming that \( G^L = \{ G_1, \ldots, G_t \} \), and then write the answer as a set.

2. Recall that game 0 is \( \{ | \} \), game 1 is \( \{ 0 | \} \). Using the definition of \(-G\), show that the negative of game 1 is game \(-1\), i.e. \( \{ | 0 \} \).

3. For the game \( G = \{ G^L | G^R \} \), recall that \(-G\) is defined as \( \{ -G^R | -G^L \} \). In this notation, assuming \( G^L = \{ G_1, \ldots, G_t \} \), what does \(-G^L\) mean. Answer in your own words, and also by giving the answer as a set.

4. Using the definition of \(-G\), prove that \(-(-G) = G\).

5. Draw the game tree for \( G = \{ 0 | 0, * \} \) and find a clobber game with this tree (hint: try a line of 4 stones). Recall that * is the game \( \{ 0 | 0 \} \). Explain the difference between game * and game 0. (What are their game trees? What outcome class is each is?)

6. In class, we saw that any game that is a P-position behaves like 0 in sum: if \( Z \) is a P-position and \( X \) is any game, then the outcome class of \( X + Z \) is the same as the outcome class of \( X \). Prove this result.

7. Prove that the game \( 1 = \{ 0 | \} \) not not behave like zero: find a game \( V \) such that \( V \) and \( V + 1 \) are in different outcome classes.

8. Let \( W \) be any game that is not a P-position (so it must be an L-position or an R-position or an N-position). Prove that \( W \) does not behave like 0: find a game \( V \) such that \( V \) and \( V + W \) are in different outcome classes.

9. Let \( A \) be the clobber game \( xxo \). Let \( B \) be the clobber game \( xo \).
   For each game, either explain why it is a P-position, or draw its game tree: