

1. Explain why the number of nonequal games with depth at most two is
 - (i) at most $16 * 16$
 - (ii) at most $6 * 6$
 - (iii) exactly 22.
2. For each of the 13 games below, give
 - (i) its definition
 - (ii) its canonical form, in notation
 - (iii) its canonical form, as a tree.

0 $*$ $*2$ ± 1 \uparrow $\uparrow *$ $\{ | 0, * \}$ $\frac{1}{2}$ $\{ 1 | * \}$ $\{ 1 | 0 \}$ 1 $1*$ 2
3. A game G is *self-negative* if $G = -G$. Which of these 13 games is
 - (i) self-negative?
 - (ii) self-negative and partizan?
 - (iii) self-negative and impartial?
4. Draw the Hasse diagram of these 13 games.
5. Using the Hasse diagram, give the outcome class for each of the 22 games with depth at most 2.
6. For any two games A, B with depth at most 2, explain how to use the Hasse diagram to find the outcome class of $A - B$. E.g. give the outcome class of $\uparrow - \downarrow *$.
7. Repeat the previous question for $A + B$. E.g. give the outcome class of $\uparrow + \downarrow *$.