

MAT 364

Quiz 4

Fall 2018

- What is the value of the game $G := \{-\frac{13}{16} \mid -\frac{5}{8}\}$? (Use the definition of simplest number.)
 a) $-\frac{3}{4}$ b) $\frac{3}{4}$ c) $-\frac{3}{8}$ d) $\frac{7}{8}$ e) $-\frac{11}{16}$
 Correct Answer: $-\frac{3}{4}$
- Same game G as in the previous question. What is the height of the game tree of G , before you do any pruning?
 a) 5 b) 6 c) 7 d) 4 e) 3
 Correct Answer: 6
- Same game G as in the previous question. What is the maximum number of moves that the game will last (again, do not prune the tree at all)?
 a) 5 b) 6 c) 7 d) 4 e) 3
 Correct Answer: 5
- Same game G as in the previous question. After pruning a reversible option on either side of the game tree for G , the new tree has height:
 a) 5 b) 6 c) 7 d) 4 e) 3
 Correct Answer: 3
- Let G be the Amazons game below. What is the value of G ?

	•		X
	X		○

- a) ± 2 b) $2 + *$ c) $3 + *$ d) 2 e) $\{3|1\}$
 Correct Answer: $\{3|1\}$
6. Let G be the Amazons game below. What is the value of G ?

•		X
X	X	○

- a) ± 2 b) -2 c) $2 + *$ d) 2 e) $\{-2|*\}$
 Correct Answer: -2
7. Determine the value of the Toppling Dominoes game below:



- a) $*2$ b) \uparrow c) Tiny_1 d) $-\frac{1}{4}$ e) $-\frac{1}{2}$
 Correct Answer: $-\frac{1}{2}$
8. Determine the value of the Toppling Dominoes game below:



- a) $*2$ b) \uparrow c) Tiny_1 d) ± 1 e) $\frac{1}{4}$
 Correct Answer: Tiny_1
9. How many losing moves, up to isomorphism, does Left have at the beginning of the previous game?
 a) 1 b) 2 c) 3 d) 4 e) 5
 Correct Answer: 1
10. What is the canonical form of the game $2 + *$?
 a) $\{2|*\}$ b) $\{*\mid 2\}$ c) $\{2, * \mid *\}$ d) $\{2|2, *\}$ e) $\{2|2\}$
 Correct Answer: $\{2|2\}$