

MAT 364/564

Quiz 4

Fall 2020

1. Let H be the game $\{1|*\}$. What is the outcome class of H ?

- a) \mathcal{L} b) none of these c) \mathcal{N} d) \mathcal{P} e) \mathcal{R}

Correct Answer: \mathcal{L}

2. Let H be the game $\{1|*\}$. Which of the following are true?

- i) H is all-small ii) H is infinitesimal iii) $H > 0$
 a) i) only b) none of these c) ii) only d) ii) and iii) only e) iii) only

Correct Answer: iii) only

3. Let H be the game $\{1|*\}$. What is the outcome class of $\{H| - H\}$?

- a) \mathcal{L} b) none of these c) \mathcal{N} d) \mathcal{P} e) \mathcal{R}

Correct Answer: \mathcal{N}

4. Let H be the game $\{1|*\}$, and let K be the game $\{H| - H\}$. Find the canonical form of K :

- a) $*$ b) $1 + *$ c) 0 d) \uparrow e) $\uparrow + *$

Correct Answer: $*$

5. Let H be the game $\{1|*\}$, and let K be the game $\{H| - H\}$. Which of the following are true?

- i) K is all-small ii) K is infinitesimal iii) $K > 0$
 a) i) only b) ii) only c) i) and ii) only d) ii) and iii) only e) iii) only

Correct Answer: ii) only

6. Let H be the game $\{1|*\}$, and let G be the game $\{0, \pm 1, H, -H \parallel 0, \pm 1, H, -H\}$. Which of the following are true?

- i) $G \geq *$ ii) $G \leq *$ iii) $G < 1$
- a) i) only b) ii) only c) i) and ii) only d) ii) and iii) only e) iii) only

Correct Answer: all of them

7. Let H be the game $\{1|*\}$, and let G be the game $\{0, \pm 1, H, -H \parallel 0, \pm 1, H, -H\}$. Exactly how many of the left options from G are dominated by another option?

- a) 0 b) 1 c) 2 d) 3 e) 4

Correct Answer: 1

8. Let H be the game $\{1|*\}$, and let G be the game $\{0, \pm 1, H, -H \parallel 0, \pm 1, H, -H\}$. Exactly how many of the left options from G are reversible?

- a) 0 b) 1 c) 2 d) 3 e) 4

Correct Answer: 3

9. Let G be the Amazons game below. What is the outcome class of $G + *$?

X		X
		•
X	o	X

- a) \mathcal{L} b) none of these c) \mathcal{N} d) \mathcal{P} e) \mathcal{R}

Correct Answer: \mathcal{P}

10. Same game G as in the previous question. What is the value of G ?

- a) $*$ b) $1 + *$ c) 0 d) \uparrow e) $\uparrow + *$

Correct Answer: $*$