Lesson Review

Learning Objectives

Please list the learning objectives of this module that you have achieved:
I certified that I am able to:

- Identify and explain the different properties of a binary relation.
- Identify equivalence relations and their equivalence classes.
- Identify different types of graphs.

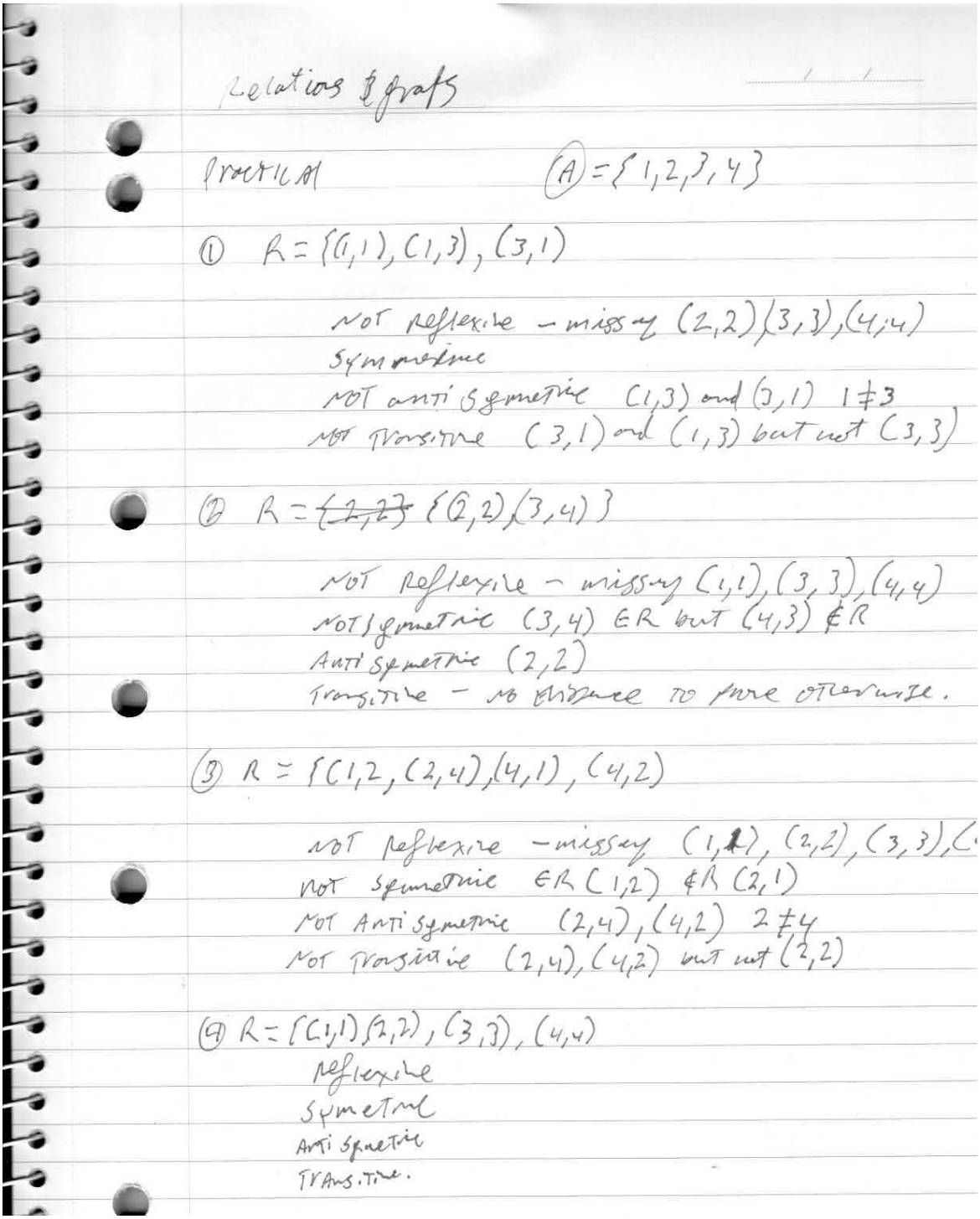
Learning Review

Please complete the table below (refer to the attached Learning Process table).

Learning Objective	**Concept** What concept / key-word did you focus on?	**Step**	**Strategy** What strategy did you apply? Why did you choose this? How did you apply it? Did it work well? How do you know?	**Resource** What resource did you use? Why did you choose this? Did it work well?	**Reflection** In hindsight, was this strategy and resource • appropriate? Why? • identify other options • was this the best option? Why?	**Learning** Generalise: what you learned that could be applied in the future in a different context
Binary Relation	Identify and explain the different properties of a binary relation.	Identify	Identify Concepts and make a list of resources needed	Unit Site Content		
		Making Sense	Read Text and Site Content, watch lecture videos, watch and follow external videos	Prescribed Text Book		
				Recorded Lectures		
		Making Meaning	Attempt practical questions, verify answers against online tools to identify any mistakes and try again	External Videos		

Equivalence Classes	Identify equivalence relations and their equivalence classes	Identify	Identify Concepts and make a list of resources needed	Unit Site content Prescribed Text Book Recorded Lectures External Videos		
		Making Sense	Read Text and Site Content, watch lecture videos, watch and follow external videos			
		Making Meaning	Attempt practical questions, verify answers against online tools to identify any mistakes and try again			
Graphs	Identify different types of graphs.	Identify	Identify Concepts and make a list of resources needed	Unit Site content Prescribed Text Book Recorded Lectures External Videos		
		Making Sense	Read Text and Site Content, watch lecture videos, watch and follow external videos			
		Making Meaning	Attempt practical questions, verify answers against online tools to identify any mistakes and try again			

Learning Evidence



Relations & graphs

Practice A = {1, 2, 3, 4}

① R = {(1,1), (1,3), (3,1)}

NOT reflexive – missing (2,2), (3,3), (4,4)
Symmetric
NOT anti symmetric (1,3) and (3,1) 1 ≠ 3
NOT Transitive (3,1) and (1,3) but not (3,3)

② R = ~~{2,2}~~ {(2,2), (3,4)}

NOT Reflexive – missing (1,1), (3,3), (4,4)
NOT symmetric (3,4) ∈ R but (4,3) ∉ R
Anti symmetric (2,2)
Transitive – no instance to prove otherwise.

③ R = {(1,2, (2,4), (4,1), (4,2)

NOT reflexive – missing (1,1), (2,2), (3,3), (
NOT symmetric ∈R (1,2) ∉R (2,1)
NOT Anti symmetric (2,4), (4,2) 2 ≠ 4
NOT Transitive (2,4), (4,2) but not (2,2)

④ R = {(1,1), (2,2), (3,3), (4,4)
reflexive
symetric
Anti symetric
TRANSITIVE.

(5) $R\{(1,2),(2,3),(3,4)\}$

NOT reflexive – missing $(1,1),(2,2),(3,3),(4,4)$
NOT symetric $\in R(1,2)$ $\notin R(2,1)$
Anti symetric —
NOT transitive $(1,2)(2,3)$ NOT $(1,3)$

(6) $R = \{(1,4),(4,1)\}$

NOT reflexive – $(1,1)(2,2)(3,3)(4,4)$ missing
Symetric
NOT Anti symetric $(1,4),(4,1) \in R$ but $1 \neq 4$
NOT Transitive $(1,4),(4,1) \in R$ but $1,1 \in R$.

Self-Assessment evidence

Relations and Graphs

Click on a question number to see how your answers were marked and, where available, full solutions.

Question Number	Score
Relations	
1	8 / 10
2	8 / 10
3	8 / 10
Graphs	
4	10 / 10
5	10 / 10
6	10 / 10
Total	54 / 60 (90%)

Performance Summary

Exam Name:	Relations and Graphs
Session ID:	02136012763
Exam Start:	Wed May 06 2020 14:38:02
Exam Stop:	Wed May 06 2020 14:39:23
Time Spent:	0:01:19