

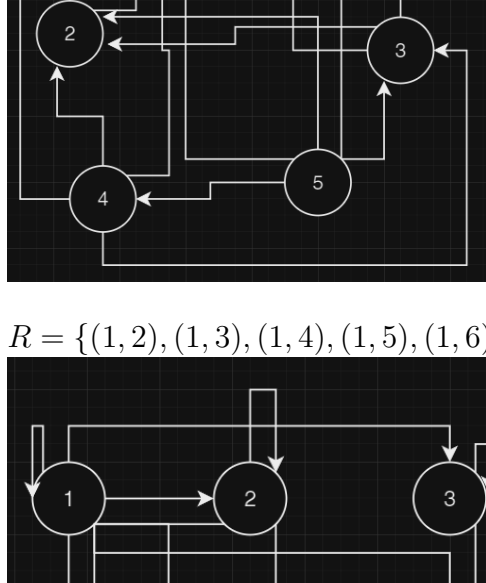
Relation Homework

Michael Padilla

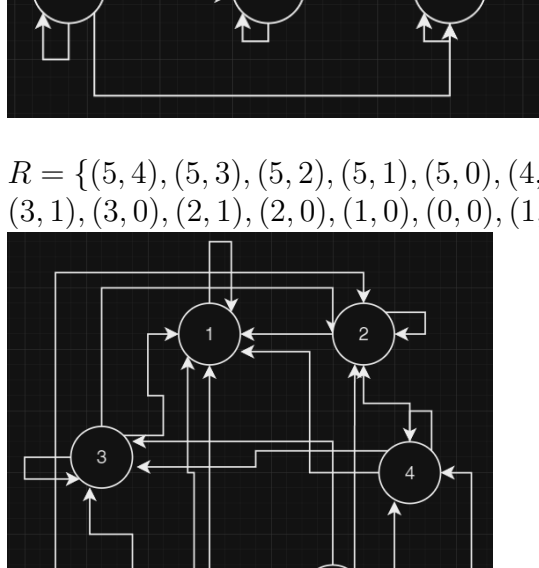
June 24, 2024

Exercises for Section 16.1

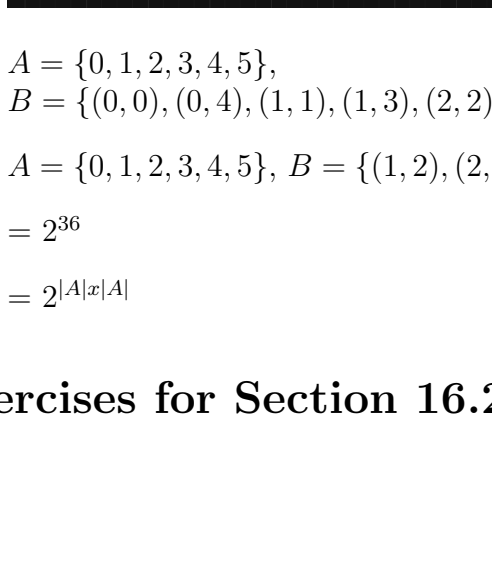
1. $R = \{(5, 4), (5, 3), (5, 2), (5, 1), (5, 0), (4, 3), (4, 2), (4, 1), (4, 0), (3, 2), (3, 1), (3, 0), (2, 1), (2, 0), (1, 0)\}$



2. $R = \{(1, 2), (1, 3), (1, 4), (1, 5), (1, 6), (1, 1), (2, 2), (2, 4), (2, 6), (3, 3), (3, 6), (4, 4), (4, 6), (5, 5), (6, 6)\}$



3. $R = \{(5, 4), (5, 3), (5, 2), (5, 1), (5, 0), (4, 3), (4, 2), (4, 1), (4, 0), (3, 2), (3, 1), (3, 0), (2, 1), (2, 0), (1, 0), (0, 0), (1, 1), (2, 2), (3, 3), (4, 4), (5, 5)\}$



4. $A = \{0, 1, 2, 3, 4, 5\}$, $B = \{(0, 0), (0, 4), (1, 1), (1, 3), (2, 2), (2, 4), (3, 3), (3, 1), (4, 4), (4, 0), (4, 2), (5, 5), (5, 1)\}$

5. $A = \{0, 1, 2, 3, 4, 5\}$, $B = \{(1, 2), (2, 5), (3, 3), (4, 3), (4, 2), (5, 0)\}$

9 = 2^{36}

11 = $2^{|A||x|A|}$

Exercises for Section 16.2

1.
2.
3.
4.
5.
7
11
12
13
15
16

Exercises for Section 16.3

1.
3
5
6
7
9
11

Exercises for Section 16.4

1.
2.
3.
5

Exercises for Section 16.5

1.
3
4
5
6