

SQA Assignment 2 Solution - Spring 2016

Problem 1

$$V(G) = 6$$

Path #	Path	C1	C2	C3	C4	C5
1	1-2-3-15-16-26	F	X	X	T	X
2	1-2-3-15-19-20-26	F	X	X	F	T
3	1-2-3-15-19-23-26	F	X	X	F	F
4	1-2-3-4-5-6-3-15-16-26	T/F	T	X	T	X
5	1-2-3-4-5-9-10-3-15-16-26	T/F	F	F	T	X
6	1-2-3-4-5-9-10-11-3-15-16-26	T/F	F	T	T	X

Problem 2

$$V(G) = 6$$

Path #	Path	C1	C2	C3	C4	C5
1	1-2-3-12-13-21	F	X	X	T	X
2	1-2-3-12-16-21	F	X	X	F	F
3	1-2-3-12-16-17-21	F	X	X	F	T
4	1-2-3-5-8-9-21	T	F	F	X	X
5	1-2-3-5-6-8-9-21	T	T	F	X	X
6	1-2-3-5-8-9-5-8-9-21	T	F/F	T/F	X	X

Problem 3

$$V(G) = 5$$

Path #	Path	C1	C2	C3	C4
1	1-2-13-17	F	X	X	F
2	1-2-13-14-13-17	F	X	X	T/F
3	1-2-3-4-10-17	T	F	X	X
4	1-2-3-4-5-8-4-10-17	T	T/F	F	X
5	1-2-3-4-5-6-8-4-10-17	T	T/F	T	X

Problem 4

$$V(G) = 8$$

Path #	Path	C1	C2	C3	C4	C5	C6	C7
1	1-2-3 ₁ -17 ₁ -18-23-25	F	X	X	X	X	T	X
2	1-2-3 ₁ -17 ₁ -17 ₂ -18-23-25	F	X	X	X	X	F	T
3	1-2-3 ₁ -17 ₁ -17 ₂ -21-23-25	F	X	X	X	X	F	F
4	1-2-3 ₁ -3 ₂ -3 ₃ -17 ₁ -18-23-25	T	F	F	X	X	T	X
5	1-2-3 ₁ -3 ₂ -4-5-14-25	T	T	X	F	X	X	X
6	1-2-3 ₁ -3 ₂ -3 ₃ -4-5-14-25	T	F	T	F	X	X	X
7	1-2-3 ₁ -3 ₂ -4-5-6-7-12-5-14-25	T	T	X	T/F	T	X	X
8	1-2-3 ₁ -3 ₂ -4-5-6-10-12-5-14-25	T	T	X	T/F	F	X	X