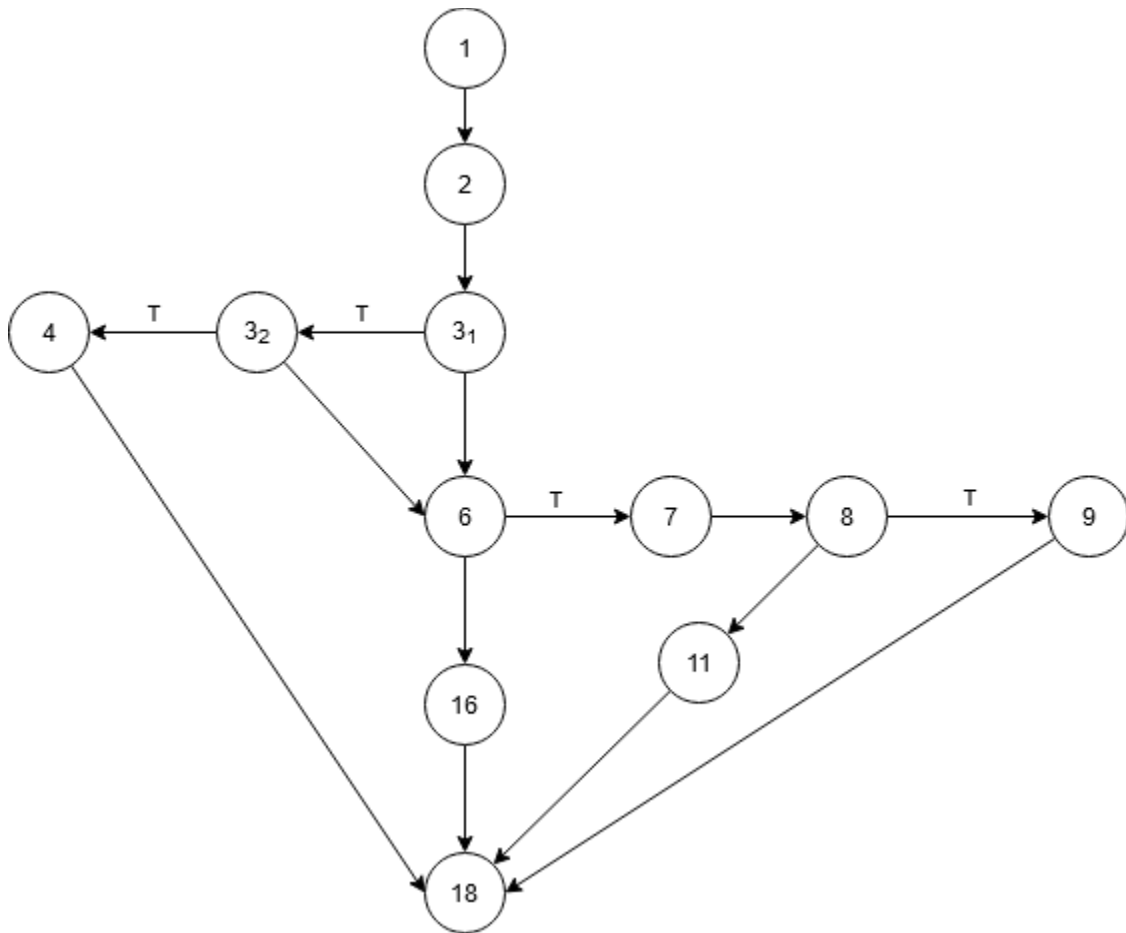# Homework 1 – Comp 5710

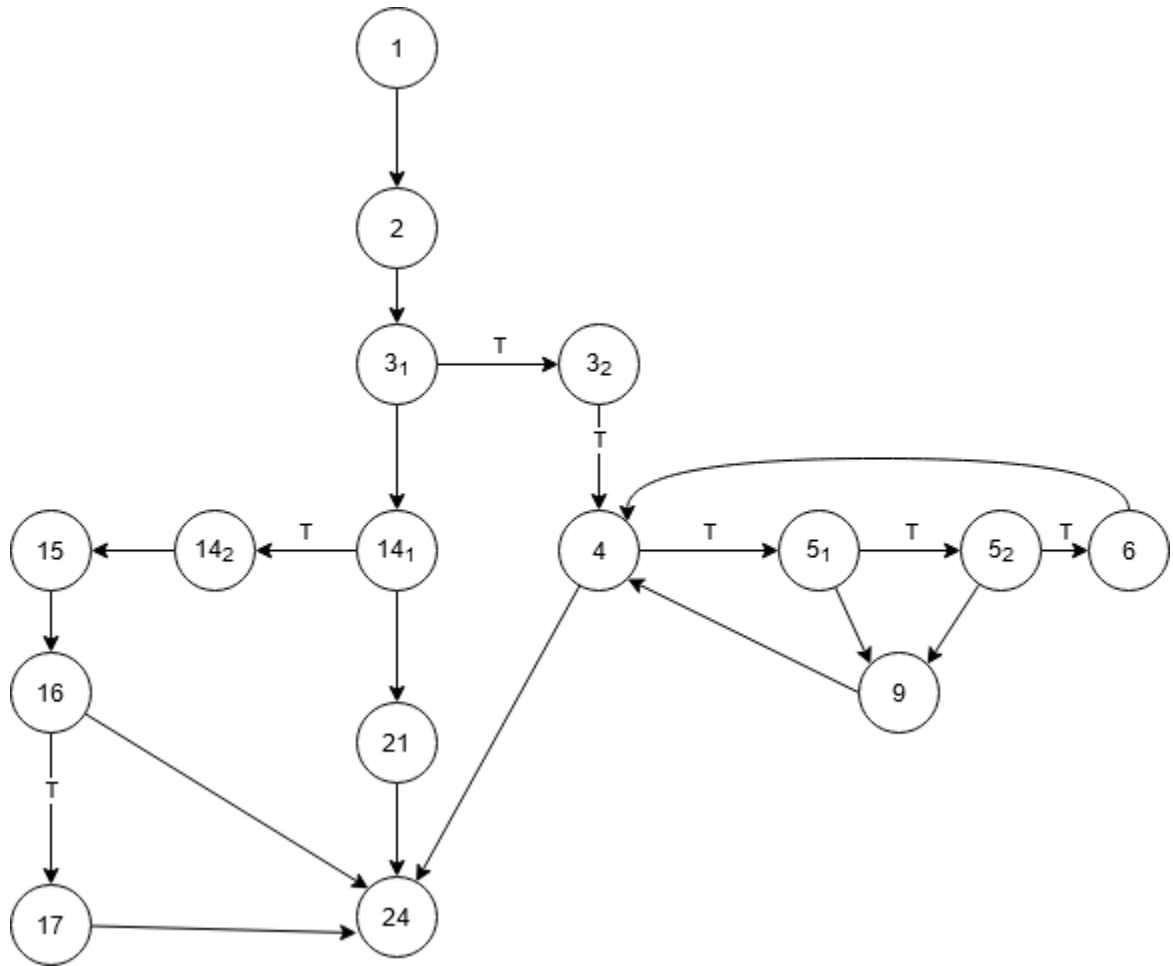## Haden Stuart – has0027

1.)

Cyclomatic Number:

(1) $|E| = 15$; $|V| = 12$; $V(G) = 15 – 12 + 2 = 5$

(2) Regions number = 4; $V(G) = 4 + 1 = 5$

(3) Conditions number = 4; $V(G) = 4 + 1 = 5$

P* = 1 + 2 * (1+2) = 7

2.)

Cyclomatic Number:

(1) |E| = 21; |V| = 16; V(G) = 21 − 16 + 2 = 7
(2) Regions number = 6; V(G) = 6 + 1 = 7
(3) Conditions number = 6; V(G) = 6 + 1 = 7

P* = 3 + (2³) = 11
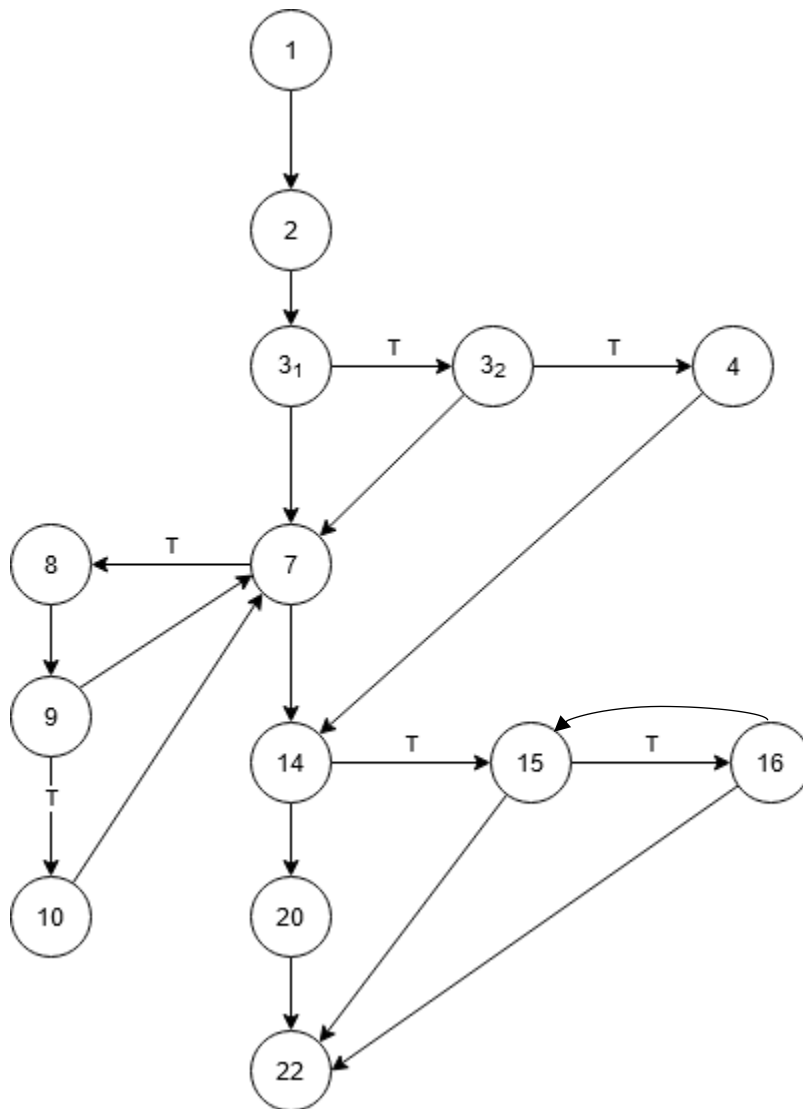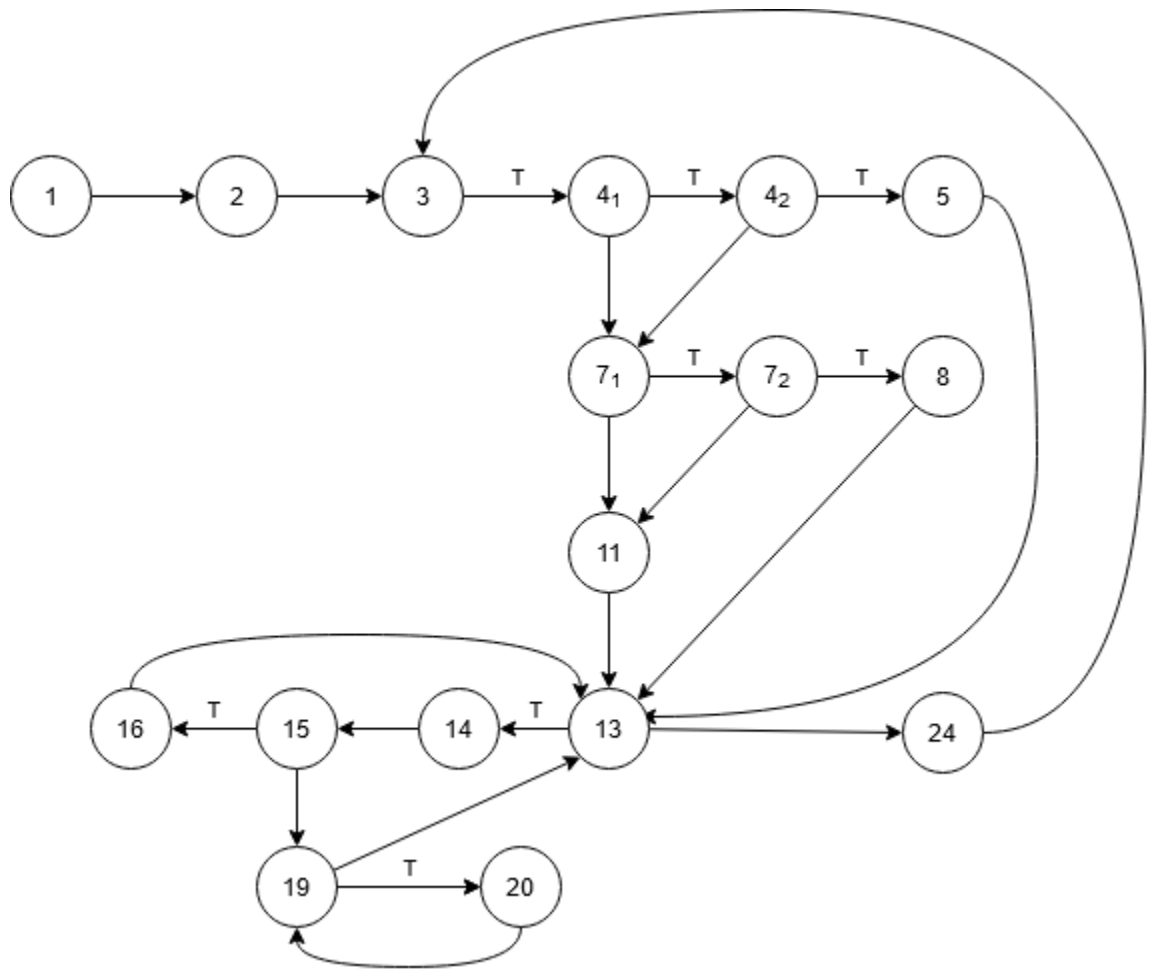
3.)

Cyclomatic Number:

(1) $|E| = 19$; $|V| = 14$; $V(G) = 19 - 14 + 2 = 7$

(2) Regions number = 6; $V(G) = 6 + 1 = 7$

(3) Conditions number = 6; $V(G) = 6 + 1 = 7$

$P^* = [3 + (2^0 + 2^1 + 2^2 + 2^3)] * [(2^3) + 1] = 17 * 9 = 153$

4.)

Cyclomatic Number:

(4) $|E| = 24$; $|V| = 17$; $V(G) = 24 - 17 + 2 = 9$

(5) Regions number = 6; $V(G) = 8 + 1 = 9$

(6) Conditions number = 6; $V(G) = 8 + 1 = 9$

P* = [5 * [1 + 1³]²]² = (5 * 4)² = 400