

Please find below the set of algebraic equations for the flattened Even-NumberGen CBD:

$$\left\{ \begin{array}{l} \text{var}(b.O_1) = \text{var}(a.I_C) \\ \text{var}(c.O_1) = \text{var}(a.I_1) \\ \text{var}(a.O_1) = \text{var}(c.I_1) \\ \text{var}(d.O_1) = \text{var}(c.I_2) \\ \text{var}(a.O_1) = \text{var}(e.I_1) \\ \text{var}(f.O_1) = \text{var}(g.I_1) \\ \text{var}(h.O_1) = \text{var}(g.I_2) \\ \text{var}(e.O_1) = \text{var}(h.I_1) \\ \text{var}(g.O_1) = \text{var}(i.I_1) \\ \text{var}(k.O_u) = \text{var}(j.I_1) \\ \text{var}(c.O_1) = \text{var}(c.I_1) + \text{var}(c.I_2) \\ \text{var}(d.O_1) = 1.0 \\ \text{var}(b.O_1) = 0.0 \\ \text{var}(f.O_1) = 2.0 \\ \text{var}(g.O_1) = \text{var}(g.I_1) \times \text{var}(g.I_2) \end{array} \right.$$

Given:

- Block **counter.delay** is represented by variable **a**
- Block **counter.zero** is represented by variable **b**
- Block **counter.sum** is represented by variable **c**
- Block **counter.one** is represented by variable **d**
- Block **counter.OutCount** is represented by variable **e**
- Block **double.two** is represented by variable **f**
- Block **double.mult** is represented by variable **g**
- Block **double.InNumber** is represented by variable **h**
- Block **double.OutDouble** is represented by variable **i**
- Block **OutEven** is represented by variable **j**
- Block **double** is represented by variable **k**