

1a
 $B1 \rightarrow B3 : B3, B1$
 $B4 \rightarrow B2 : B2, B4$
 $B4 \rightarrow B1 : B1, B3, B2, B4$
1b
 $gen[B1] = \{1, 2, 3, 4\}$
 $kill[B1] = \{1, 6, 7, 9\}$
 $gen[B2] = \{5, 6\}$
 $kill[B2] = \{4, 7\}$
 $gen[B3] = \{7\}$
 $kill[B3] = \{4, 6\}$
 $gen[B4] = \{8, 9\}$
 $kill[B4] = \{1, 3\}$
1c

| Block B | Initial | | Pass 1 | |
|---------|-------------|----------|---------|----------|
| | $in[B]$ | $out[B]$ | $in[B]$ | $out[B]$ |
| B1 | 0 0000 0000 | | | |
| B2 | 0 0000 0000 | | | |
| B3 | 0 0000 0000 | | | |
| B4 | 0 0000 0000 | | | |