```
def test(i):
  v = OX()
  if i % 2:
    tmp = i + 1
    v.m1(tmp)
  else:
    v = OY()
    v.m2()
  print v.m3()
```
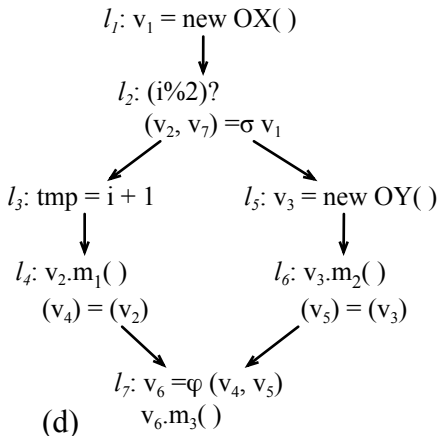
(a)

l_1: v = new OX( )

l_2: (i%2)?

l_3: tmp = i + 1 l_5: v = new OY( )

l_4: v.m$_1$( ) l_6: v.m$_2$( )

l_7: v.m$_3$( )

(b)

l_1: v = new OX( )
$\{m_1, m_3\}$

l_2: (i%2)?
$\{m_1, m_3\}$ $\{ \}$

l_3: tmp = i + 1 l_5: v = new OY( )
$\{m_1, m_3\}$ $\{m_2, m_3\}$

l_4: v.m$_1$( ) l_6: v.m$_2$( )
$\{m_3\}$ $\{m_3\}$

l_7: v.m$_3$( )

(c)

l_1: v_1 = new OX( )

l_2: (i%2)?
$(v_2, v_7) = \sigma v_1$

l_3: tmp = i + 1 l_5: v_3 = new OY( )

l_4: v_2.m$_1$( ) l_6: v_3.m$_2$( )
$(v_4) = (v_2)$ $(v_5) = (v_3)$

l_7: $v_6 = \varphi (v_4, v_5)$
v_6.m$_3$( )
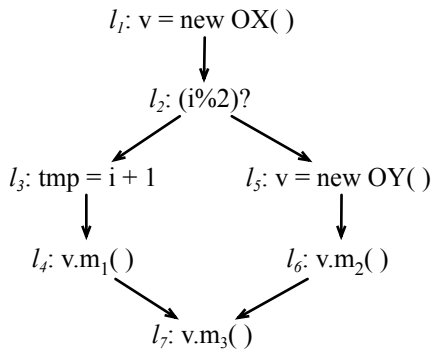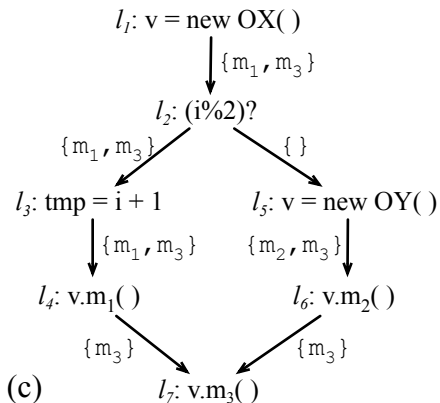
(d)

$I(v_6) = \{m_3\}$

$I(v_5) = I(v_6)$

$I(v_4) = I(v_6)$

$I(v_2) = \{m_1\} \cup I(v_4)$

$I(v_3) = \{m_2\} \cup I(v_5)$

$I(v_7) = \{\}$

$I(v_1) = I(v_2) \cup I(v_7)$

(e)