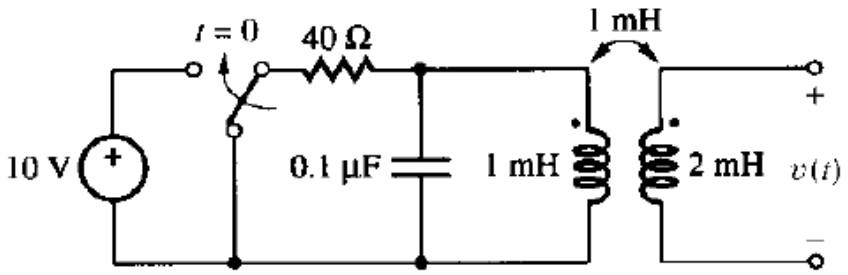

Figure P15.38

15.39 Suppose the terminals of the 2-mH coil of Figure P15.38 are shorted together. Assuming zero stored energy prior to switch activation, find the current out of the dotted terminal of the 2-mH coil. Comment.

```
clc, clear, close all
format short g

vf = 10;
c = 0.1e-6;
l1 = 1e-3;
l2 = 2e-3;
lm = 1e-3;
```

realizamos un analisis de mallas, podemos ver que tenemos trs mallas al cerrar el interruptor.

```
syms i1 i2 i3 z1 z2 z3 z4 z5

% z1 = 40;
% z2 = 1/(j*w*c);
% z3 = j*w*l1;
% z4 = j*w*l2;
% z5 = j*w*lm;

ec1= simplify(-10+40*i1+z2*i1==0)
```

ec1 = $i_1\,(z_2 + 40) = 10$

```
ec2= simplify(z2*i2+z3*i2-z5*i3==0)
```

ec2 = $i_2\,(z_2 + z_3) = i_3\,z_5$

```
ec3 = simplify(z4*i3-z5*i2==0)
```

ec3 = $i_2\,z_5 = i_3\,z_4$

```
m = [17 -12 0;6 -26 5;0 1 -4];
n = [180;0;18];
h = m\n
```

```
h = 3×1
    12
     2
    -4
```

y asi obtenemos las correintes en cada malla