```
> f1 := k1*x1*x2^2 - k2*x3;
  f2 := -(k1*x1*x2^2 - k2*x3);
  f3 := -(k1*x1*x2^2 - k2*x3);
  h1 := k1*x1*x2^2 - k2*x3;
  h2 := -x1 - x2 - c1;
  h3 := -x1 - x3 - c2:
                               f1 := k1 \ x1 \ x2^2 - k2 \ x3
                               f2 := -k1 \ x1 \ x2^2 + k2 \ x3
                               f3 := -k1 \ x1 \ x2^2 + k2 \ x3
                               h1 := k1 \ x1 \ x2^2 - k2 \ x3
                                  h2 := -x1 - x2 - c1
                                  h3 := -x1 - x3 - c2
                                                                                            (1)
> sh := subs(c1=-3, c2=-11/4, k1=1, k2=8/3, [h1, h2, h3]);
                sh := \left[ x1 \ x2^2 - \frac{8 \ x3}{3}, \ -x1 - x2 + 3, \ -x1 - x3 + \frac{11}{4} \right]
                                                                                            (2)
=
> r:=RootFinding[Isolate](sh, [x1, x2, x3]);
r := [[x1 = 2.577350269, x2 = 0.4226497308, x3 = 0.1726497308], [x1 = 2., x2 = 1.]
                                                                                            (3)
    x3 = 0.75000000000], [x1 = 1.422649731, x2 = 1.577350269, x3 = 1.327350269]]
> sf = subs(c1=-3, c2=-11/4, k1=1, k2=8/3, [f1, f2, f3]);
              sf := \left[ x1 \ x2^2 - \frac{8 \ x3}{3}, \ -x1 \ x2^2 + \frac{8 \ x3}{3}, \ -x1 \ x2^2 + \frac{8 \ x3}{3} \right]
                                                                                            (4)
> for i from 1 to nops(r) do
           subs(r[i], diff(sf[1], x1)) + subs(r[i], diff(sf[2], x2))
       + subs(r[i], diff(sf[3], x3));
  od;
                                     0.66666668
                                     -0.333333333
                                     0.66666666
                                                                                            (5)
```