

```
> #Please do NOT post homework
#Jeton Hida, Assignment 13, October 18, 2021
```

```
> read "/Users/jeton/Desktop/Math 336/M13.txt"
> #Number 2
```

```
> F:=[(1*x^2+7*x+0)/(1*x^2+0*x+0), (8*x^2+7*x+0)/(0*x^2+0*x+6)]
```

$$F := \left[ \frac{x^2 + 7x}{x^2}, \frac{4}{3}x^2 + \frac{7}{6}x \right] \quad (1)$$

```
> FP2(F,x,y)
```

$$\left[ \left[ \text{RootOf}(\_Z^2 - \_Z - 7), \frac{5 \text{RootOf}(\_Z^2 - \_Z - 7)}{2} + \frac{28}{3} \right] \right] \quad (2)$$

```
> Help13()
```

```
RT2(x,y,d,K), Orb2(F,x,y,pt0,K1,K2), FP2(F,x,y), SFP2(F,x,y), PlotOrb2(L), FP2drz(F,x,y),
SFP2drz(F,x,y) \quad (3)
```

```
> print(FP2)
```

```
proc(F,x,y) \quad (4)
```

```
local L,i;
```

```
L := [solve({F[1]=x,F[2]=y},{x,y})]; [seq(subs(L[i],[x,y]),i=1..nops(L))]
```

```
end proc
```

```
> print(Orb2)
```

```
proc(F,x,y,pt0,K1,K2) \quad (5)
```

```
local pt,L,i;
```

```
pt := pt0;
```

```
for i to K1 do pt := subs({x=pt[1],y=pt[2]},F) end do;
```

```
L := [ ];
```

```
for i from K1 + 1 to K2 do
```

```
  L := [op(L),pt]; pt := subs({x=pt[1],y=pt[2]},F)
```

```
end do;
```

```
L
```

```
end proc
```

```
> SFP2(F,x,y);
```

```
Orb2(F,x,y,[7.5,.5],1000,1010)
```

```
[[3.192582404, 17.31478934]]
```

```
[[3.192582405, 17.31478932], [3.192582402, 17.31478935], [3.192582405, 17.31478932], \quad (6)
```

```
[3.192582402, 17.31478935], [3.192582405, 17.31478932], [3.192582402,
```

```
17.31478935], [3.192582405, 17.31478932], [3.192582402, 17.31478935],
```

```
[3.192582405, 17.31478932], [3.192582402, 17.31478935]]
```

```
> #Number 3
```

```
> F:=RT2(x,y,1,100)
```

$$F := \left[ \frac{47 + 8y + 46x}{44 + 9y + 77x}, \frac{59 + 16y + x}{70 + 77y + 39x} \right] \quad (7)$$

- > **SFP2(F, x, y)** (8)  

$$[ ]$$
- > **F:=RT2(x, y, 1, 100)** (9)  

$$F := \left[ \frac{92 + 71y + 67x}{78 + 51y + 53x}, \frac{12 + 19y + 63x}{40 + 90y + 3x} \right]$$
- > **SFP2(F, x, y)** (10)  

$$[[1.259593358, 0.8791974895]]$$
- > **Orb2(F, x, y, [3.4, 1.7], 1000, 1010)** (11)  

$$[[1.259593358, 0.8791974894], [1.259593358, 0.8791974894], [1.259593358, 0.8791974894], [1.259593358, 0.8791974894], [1.259593358, 0.8791974894], [1.259593358, 0.8791974894], [1.259593358, 0.8791974894], [1.259593358, 0.8791974894], [1.259593358, 0.8791974894], [1.259593358, 0.8791974894]]$$
- > **F:=RT2(x, y, 1, 100)** (12)  

$$F := \left[ \frac{49 + 49y + 67x}{74 + 90y + 74x}, \frac{27 + 98y + 72x}{2 + 73y + 85x} \right]$$
- > **SFP2(F, x, y)** (13)  

$$[[0.6528216031, 1.321846941]]$$
- > **Orb2(F, x, y, [.802, 4.2], 1000, 1010)** (14)  

$$[[0.6528216034, 1.321846940], [0.6528216034, 1.321846940], [0.6528216034, 1.321846940], [0.6528216034, 1.321846940], [0.6528216034, 1.321846940], [0.6528216034, 1.321846940], [0.6528216034, 1.321846940], [0.6528216034, 1.321846940], [0.6528216034, 1.321846940], [0.6528216034, 1.321846940]]$$
- > **F:=RT2(x, y, 1, 100)** (15)  

$$F := \left[ \frac{41 + 4y + 44x}{13 + 19y + 10x}, \frac{15 + 64y + 9x}{12 + 52y + 25x} \right]$$
- > **SFP2(F, x, y)** (16)  

$$[[3.169979666, 0.6897016763]]$$
- > **Orb2(F, x, y, [.421001, 1.7532], 1000, 1010)** (17)  

$$[[3.169979666, 0.6897016765], [3.169979666, 0.6897016765], [3.169979666, 0.6897016765], [3.169979666, 0.6897016765], [3.169979666, 0.6897016765], [3.169979666, 0.6897016765], [3.169979666, 0.6897016765], [3.169979666, 0.6897016765], [3.169979666, 0.6897016765], [3.169979666, 0.6897016765]]$$
- > **F:=RT2(x, y, 1, 100)** (18)  

$$F := \left[ \frac{72 + 90y + 18x}{43 + 55y + 40x}, \frac{17 + 70y + 52x}{81 + 87y + 34x} \right]$$
- > **SFP2(F, x, y)** (19)  

$$[[1.208133500, 0.7042432306]]$$
- > **Orb2(F, x, y, [7.9, 1.2], 1000, 1005)** (20)  

$$[[1.208133501, 0.7042432303], [1.208133499, 0.7042432312], [1.208133500, 0.7042432303], [1.208133499, 0.7042432307], [1.208133501, 0.7042432303]]$$
- > **F:=RT2(x, y, 1, 100)** (21)

$$F := \left[ \frac{85 + 9y + 68x}{83 + 63y + 100x}, \frac{70 + 36y + 36x}{10 + 40y + 66x} \right] \quad (21)$$

> **SFP2(F, x, y)**  

$$[[0.6049974286, 1.350612004]] \quad (22)$$

> **Orb2(F, x, y, [6.9, .5], 1000, 1005)**  

$$[[0.6049974288, 1.350612004], [0.6049974288, 1.350612003], [0.6049974288, 1.350612004], [0.6049974288, 1.350612003], [0.6049974288, 1.350612004]] \quad (23)$$

> **F:=RT2(x, y, 1, 100)**  

$$F := \left[ \frac{87 + 16y + 98x}{43 + 53y + 61x}, \frac{47 + 28y + 75x}{3 + 5y + 11x} \right] \quad (24)$$

> **SFP2(F, x, y)**  

$$[[0.586850559, 6.506538819]] \quad (25)$$

> **Orb2(F, x, y, [.1111, .3333], 1000, 1005)**  

$$[[0.5868505549, 6.506538820], [0.5868505549, 6.506538820], [0.5868505549, 6.506538820], [0.5868505549, 6.506538820], [0.5868505549, 6.506538820]] \quad (26)$$

> **F:=RT2(x, y, 1, 100)**  

$$F := \left[ \frac{37 + 75y + 4x}{91 + 22y + 40x}, \frac{58 + 93y + 98x}{11 + 30y + 6x} \right] \quad (27)$$

> **SFP2(F, x, y)**  

$$[[1.459248295, 4.082633122]] \quad (28)$$

> **Orb2(F, x, y, [.00003, .00001], 1000, 1005)**  

$$[[1.459248294, 4.082633120], [1.459248294, 4.082633122], [1.459248294, 4.082633120], [1.459248294, 4.082633122], [1.459248294, 4.082633120]] \quad (29)$$

> **F:=RT2(x, y, 1, 100)**  

$$F := \left[ \frac{32 + 40y + 24x}{80 + 96y + 11x}, \frac{23 + 41y + 52x}{58 + 67y + 81x} \right] \quad (30)$$

> **SFP2(F, x, y)**  

$$[[0.47477235, 0.5258468959]] \quad (31)$$

> **Orb2(F, x, y, [10.9, 20.3], 1000, 1005)**  

$$[[0.4747723604, 0.5258468959], [0.4747723604, 0.5258468959], [0.4747723604, 0.5258468959], [0.4747723604, 0.5258468959], [0.4747723604, 0.5258468959]] \quad (32)$$

> **F:=RT2(x, y, 1, 100)**  

$$F := \left[ \frac{65 + 69y + 2x}{36 + 61y + 84x}, \frac{96 + 94y + 31x}{81 + 31y + 54x} \right] \quad (33)$$

> **SFP2(F, x, y)**  

$$[[0.8556835833, 1.523365570]] \quad (34)$$

> **Orb2(F, x, y, [.000009, 100.1], 1000, 1005)**  

$$[[0.8556835824, 1.523365569], [0.8556835833, 1.523365571], [0.8556835829, 1.523365570], [0.8556835824, 1.523365569], [0.8556835833, 1.523365571]] \quad (35)$$

> **F:=RT2(x, y, 1, 100)**  

$$F := \left[ \frac{67 + 59y + 66x}{12 + 49y + 90x}, \frac{35 + 15y + 26x}{100 + 24y + 8x} \right] \quad (36)$$

> **SFP2(F, x, y)**

[ ] (37)

> **F:=RT2(x,y,1,100)**

$$F := \left[ \frac{94 + 52y + 16x}{29 + 51y + 3x}, \frac{45 + 67y + 40x}{71 + 74y + 49x} \right] \quad (38)$$

> **SFP2(F,x,y)**

[[2.2557065, 0.7837939465]] (39)

> **Orb2(F,x,y,[300,10.1],1000,1005)**

[[2.255706517, 0.7837939466], [2.255706518, 0.7837939468], [2.255706517, 0.7837939466], [2.255706518, 0.7837939468], [2.255706517, 0.7837939466]] (40)

> **F:=RT2(x,y,1,100)**

$$F := \left[ \frac{60 + 69y + 33x}{30 + y + 83x}, \frac{9 + 64y + 43x}{57 + 52y + 62x} \right] \quad (41)$$

> **SFP2(F,x,y)**

[ ] (42)

> **F:=RT2(x,y,1,100)**

$$F := \left[ \frac{46 + 76y + 9x}{53 + 37y + 88x}, \frac{50 + 37y + 76x}{95 + 8y + 92x} \right] \quad (43)$$

> **SFP2(F,x,y)**

[[0.760670490, 0.8021705343]] (44)

> **Orb2(F,x,y,[200.1,.001],1000,1005)**

[[0.7606704855, 0.8021705341], [0.7606704850, 0.8021705342], [0.7606704855, 0.8021705341], [0.7606704850, 0.8021705342], [0.7606704855, 0.8021705341]] (45)

> **F:=RT2(x,y,1,100)**

$$F := \left[ \frac{92 + 2y + 97x}{44 + 9y + 30x}, \frac{14 + 79y + 73x}{21 + 78y + 49x} \right] \quad (46)$$

> **SFP2(F,x,y)**

[[2.605574293, 1.231921109]] (47)

> **Orb2(F,x,y,[400.1,2.6],1000,1005)**

[[2.605574292, 1.231921112], [2.605574292, 1.231921112], [2.605574292, 1.231921112], [2.605574292, 1.231921112], [2.605574292, 1.231921112]] (48)

> **F:=RT2(x,y,1,100)**

$$F := \left[ \frac{93 + 15y + 56x}{69 + 17y + 21x}, \frac{42 + 21y + 5x}{58 + 3y + 86x} \right] \quad (49)$$

> **SFP2(F,x,y)**

[[1.771779264, 0.2674316445]] (50)

> **Orb2(F,x,y,[.00003872,12.25342785],1000,1005)**

[[1.771779263, 0.2674316446], [1.771779263, 0.2674316446], [1.771779263, 0.2674316446], [1.771779263, 0.2674316446], [1.771779263, 0.2674316446]] (51)

> **F:=RT2(x,y,1,100)**

$$F := \left[ \frac{55 + 97y + 4x}{92 + 46y + 88x}, \frac{34 + 68y + 49x}{61 + 21y + 86x} \right] \quad (52)$$

> **SFP2(F,x,y)**

[ ] (53)

> **F:=RT2(x,y,1,100)**

$$F := \left[ \frac{42 + 5y + 33x}{77 + 98y + 58x}, \frac{98 + 29y + 65x}{29 + 35y + 29x} \right] \quad (54)$$

> **SFP2(F,x,y)**

$$[[0.2255303705, 1.703110459]] \quad (55)$$

> **Orb2(F,x,y,[8.2,103],1000,1005)**

$$[[0.2255303705, 1.703110459], [0.2255303705, 1.703110459], [0.2255303705, 1.703110459], [0.2255303705, 1.703110459], [0.2255303705, 1.703110459]] \quad (56)$$

> **F:=RT2(x,y,1,100)**

$$F := \left[ \frac{34 + 66y + 44x}{60 + 83y + 32x}, \frac{85 + 100y + 68x}{59 + 40y + 76x} \right] \quad (57)$$

> **SFP2(F,x,y)**

$$[] \quad (58)$$

> **F:=RT2(x,y,1,100)**

$$F := \left[ \frac{92 + 39y + 17x}{50 + 78y + 20x}, \frac{18 + 18y + 51x}{34 + 78y + 10x} \right] \quad (59)$$

> **SFP2(F,x,y)**

$$[[1.055721848, 0.8044562822]] \quad (60)$$

> **Orb2(F,x,y,[74.3423,20.69013],1000,1005)**

$$[[1.055721847, 0.8044562823], [1.055721848, 0.8044562819], [1.055721847, 0.8044562823], [1.055721848, 0.8044562819], [1.055721847, 0.8044562823]] \quad (61)$$

> **#Number 4**  
**#i.**  
 > **print(RT2)**  
**proc(x,y,d,K)** (62)

```

local ra,i,j,f,g;
ra := rand(1..K);
f := add(add(ra()*x^i*y^j,j=0..d-i),i=0..d)/add(add(ra()*x^i*y^j,j=0..d-i),i=0..d);
g := add(add(ra()*x^i*y^j,j=0..d-i),i=0..d)/add(add(ra()*x^i*y^j,j=0..d-i),i=0..d);
[f,g]

```

**end proc**

```

> RT3:=proc(x,y,z,d,K):
local ra,i,j,l,f,g,h;
ra:=rand(1..K);
f:=add(add(add(ra()*x^i*y^j*z^l,l=0..d-j), j = 0 .. d - i), i = 0 .. d)/add(add(add(ra()*x^i*y^j*z^l,l=0..d-j), j = 0 .. d - i), i = 0 .. d);
g:=add(add(add(ra()*x^i*y^j*z^l,l=0..d-j), j = 0 .. d - i), i = 0 .. d)/add(add(add(ra()*x^i*y^j*z^l,l=0..d-j), j = 0 .. d - i), i = 0 .. d);
h:=add(add(add(ra()*x^i*y^j*z^l,l=0..d-j), j = 0 .. d - i), i = 0 .. d)/add(add(add(ra()*x^i*y^j*z^l,l=0..d-j), j = 0 .. d - i), i = 0 .. d);
[f,g,h]

```

```

end proc:
> F:=RT3(x,y,z,1,100)
F := [ 96 x z + 51 x + 68 y + 24 z + 69 , 14 x z + 2 x + 50 y + 80 z + 66
      57 x z + 35 x + 88 y + 66 z + 63 , 19 x z + x + 73 y + 73 z + 99 ,
      91 x z + 73 x + 79 y + 2 z + 58
      50 x z + 73 x + y + 65 z + 23 ]

```

(63)

```

> #ii.
> print(Orb2)
proc(F,x,y,pt0,K1,K2)

```

(64)

```

    local pt,L,i;
    pt := pt0;
    for i to K1 do pt := subs({x=pt[1],y=pt[2]},F) end do;
    L := [ ];
    for i from K1 + 1 to K2 do
        L := [op(L),pt]; pt := subs({x=pt[1],y=pt[2]},F)
    end do;
    L
end proc

```

```

> Orb3:=proc(F,x,y,z,pt0,K1,K2):
    local pt,L,i;
    pt:=pt0;
    for i to K1
    do pt:=subs({x=pt[1],y=pt[2],z=pt[3]},F)
    end do;
    L:= [ ];
    for i from K1 + 1 to K2
    do L:=[op(L),pt];
    pt:=subs({x=pt[1],y=pt[2],z=pt[3]},F)
    end do;
    L
end proc:

```

```

> Orb3 (F,x,y,z,[.5,2,.3],1000,1005)
[[1.006069984, 0.8264198368, 1.290194496], [1.006069984, 0.8264198368, 1.290194496],
 [1.006069984, 0.8264198368, 1.290194496], [1.006069984, 0.8264198368,
 1.290194496], [1.006069984, 0.8264198368, 1.290194496]]

```

(65)

```

> print(FP2)
proc(F,x,y)
    local L,i;
    L := [solve({F[1]=x,F[2]=y},{x,y}); [seq(subs(L[i],[x,y]),i=1..nops(L))]
end proc

```

(66)

```

> #iii.
FP3:=proc(F,x,y,z)
    local L,i;
    L := [solve({F[1]=x,F[2]=y,F[3]=z},{x,y,z})];
    [seq(subs(L[i],[x,y,z]),i=1..nops(L))]
end proc:
> #iv.

```

```

> print(SFP2)
proc(F, x, y)
  local L, J, S, J0, i, pt, EV;
  L := evalf(FP2(F, x, y));
  J := Matrix(normal([[diff(F[1], x), diff(F[2], x)], [diff(F[1], y), diff(F[2], y)]]));
  S := [];
  for i to nops(L) do
    pt := L[i];
    J0 := subs({x=pt[1], y=pt[2]}, J);
    EV := LinearAlgebra:-Eigenvalues(J0);
    if abs(EV[1]) < 1 and abs(EV[2]) < 1 then S := [op(S), pt] end if
  end do;
  S
end proc

```

```

> SFP3:=proc(F, x, y, z):
  local L, J, S, J0, i, pt, EV;
  L := evalf(FP3(F, x, y, z));
  J := Matrix(normal([[diff(F[1], x), diff(F[2], x), diff(F[3], x)], [diff(F[1], y), diff(F[2], y), diff(F[3], y)], [diff(F[1], z), diff(F[2], z), diff(F[3], z)]]));
  S := [];
  for i to nops(L) do pt := L[i]; J0 := subs({x=pt[1], y=pt[2], z=pt[3]}, J); EV := LinearAlgebra:-Eigenvalues(J0); if abs(EV[1])<1 and abs(EV[2])<1 and abs(EV[3])<1 then S := [op(S), pt] end if end do;
  S end proc:

```

```

> #Number 5
F:=RT3(x, y, z, 1, 100)
F := [ [ 25xz + 61x + 68y + 83z + 83, 75xz + 76x + 34y + 94z + 4,
        37xz + 81x + 86y + 7z + 54, 48xz + 21x + 28y + 34z + 42,
        81xz + 62x + 77y + 20z + 2 ]
       [ 6xz + 30x + 75y + 43z + 3 ] ]

```

```

> SFP3(F, x, y, z)
[ ]

```

```

> F:=RT3(x, y, z, 1, 100)
F := [ [ 12xz + 46x + 94y + 16z + 28, 96xz + 3x + 18y + 42z + 14,
        67xz + 72x + 39y + 69z + 66, 27xz + 36x + 29y + 6z + 76,
        47xz + 67x + 77y + 20z + 96 ]
       [ 46xz + 68x + 78y + 65z + 88 ] ]

```

```

> SFP3(F, x, y, z)
[[0.6479819341, 0.852237956, 0.88414200]]

```

```

> Orb3(F, x, y, z, [.5, 2, .1], 1000, 1005)
[[0.6479819341, 0.8522379429, 0.8841420045], [0.6479819342, 0.8522379423,
0.8841420045], [0.6479819338, 0.8522379423, 0.8841420045], [0.6479819341,
0.8522379429, 0.8841420045], [0.6479819342, 0.8522379423, 0.8841420045]]

```

```

> F:=RT3(x, y, z, 1, 100)

```

$$F := \left[ \frac{92xz + 59x + 19y + 90z + 28}{69xz + x + 32y + 62z + 89}, \frac{19xz + 42x + 6y + 89z + 24}{35xz + 16x + 99y + 68z + 81}, \frac{20xz + 6x + y + z + 73}{64xz + 31x + 83y + 52z + 85} \right] \quad (73)$$

> **SFP3(F, x, y, z)** (74)  
[[1.10396959, 0.592103097, 0.4101203967]]

> **Orb3(F, x, y, z, [.2, .10, .99], 1000, 1005)** (75)  
[[1.103969586, 0.5921030950, 0.4101203968], [1.103969586, 0.5921030950, 0.4101203968], [1.103969586, 0.5921030950, 0.4101203968], [1.103969586, 0.5921030950, 0.4101203968], [1.103969586, 0.5921030950, 0.4101203968]]

> **F:=RT3(x, y, z, 1, 100)** (76)  

$$F := \left[ \frac{50xz + 35x + 57y + 68z + 57}{54xz + 41x + 23y + 26z + 50}, \frac{2xz + 95x + 6y + 35z + 87}{79xz + 46x + 84y + 32z + 35}, \frac{86xz + 15x + 10y + 33z + 16}{9xz + 34x + 92y + 81z + 42} \right]$$

> **SFP3(F, x, y, z)** (77)  
[]

> **F:=RT3(x, y, z, 1, 100)** (78)  

$$F := \left[ \frac{68xz + 62x + 75y + 25z + 49}{48xz + 70x + 8y + 98z + 76}, \frac{xz + 97x + 74y + 37z + 45}{85xz + 14x + 94y + 39z + 7}, \frac{54xz + 65x + 8y + 100z + 28}{16xz + 87x + 14y + 31z + 43} \right]$$

> **SFP3(F, x, y, z)** (79)  
[]

> **F:=RT3(x, y, z, 1, 100)** (80)  

$$F := \left[ \frac{9xz + 57x + 68y + 64z + 100}{72xz + 84x + 98y + z + 30}, \frac{14xz + 59x + 20y + 62z + 48}{55xz + 62x + 56y + 6z + 54}, \frac{6xz + 90x + 3y + 26z + 94}{47xz + 92x + 92y + 61z + 65} \right]$$

> **SFP3(F, x, y, z)** (81)  
[[1.053899080, 0.851805631, 0.676800806]]

> **Orb3(F, x, y, z, [.111, .9999, 3], 1000, 1005)** (82)  
[[1.053899080, 0.8518056205, 0.6768008159], [1.053899080, 0.8518056205, 0.6768008157], [1.053899080, 0.8518056205, 0.6768008159], [1.053899080, 0.8518056205, 0.6768008157], [1.053899080, 0.8518056205, 0.6768008159]]

> **F:=RT3(x, y, z, 1, 100)** (83)  

$$F := \left[ \frac{55xz + 17x + 30y + 65z + 51}{56xz + 92x + 19y + 59z + 60}, \frac{3xz + 63x + 42y + 5z + 37}{80xz + 98x + 51y + 96z + 79}, \frac{70xz + 16x + 16y + 15z + 13}{24xz + 64x + 38y + 42z + 54} \right]$$

> **SFP3(F, x, y, z)** (84)  
[]



> **F:=RT3(x,y,z,1,100)**

$$F := \left[ \frac{49xz + 44x + 16y + 74z + 27}{15xz + 34x + 20y + 62z + 19}, \frac{92xz + 76x + 65y + 34z + 100}{83xz + 72x + 24y + 64z + 45}, \frac{56xz + 47x + 4y + 96z + 86}{29xz + 68x + 21y + 78z + 59} \right] \quad (85)$$

> **SFP3(F,x,y,z)**

$$[[1.463659497, 1.23849621, 1.12468506]] \quad (86)$$

> **Orb3(F,x,y,z,[.42,8.2,1.1],1000,1005)**

$$[[1.463659496, 1.238496343, 1.124684638], [1.463659497, 1.238496343, 1.124684637], [1.463659496, 1.238496343, 1.124684638], [1.463659497, 1.238496343, 1.124684637], [1.463659496, 1.238496343, 1.124684638]] \quad (87)$$

> **F:=RT3(x,y,z,1,100)**

$$F := \left[ \frac{36xz + 80x + 57y + 88z + 71}{69xz + 3x + 27y + 29z + 45}, \frac{93xz + 73x + 10y + 99z + 27}{91xz + 19x + 16y + 38z + 16}, \frac{86xz + 84x + 5y + 46z + 31}{48xz + 67x + 89y + 81z + 28} \right] \quad (88)$$

> **SFP3(F,x,y,z)**

$$[] \quad (89)$$

> **F:=RT3(x,y,z,1,100)**

$$F := \left[ \frac{65xz + 65x + 35y + 13z + 23}{73xz + 24x + 99y + 80z + 26}, \frac{69xz + 34x + 86y + 39z + 21}{38xz + 84x + 40y + 84z + 85}, \frac{4xz + 94x + 61y + 13z + 100}{93xz + 32x + 52y + 17z + 31} \right] \quad (90)$$

> **SFP3(F,x,y,z)**

$$[] \quad (91)$$