

```

>> _<x>:=PolynomialRing(Rationals(K));
      ^
Runtime error in 'Rationals': Bad argument types
Argument types given: FldPad

> _<x>:=PolynomialRing((K));
> frm:=x^5 - 245*x^3 + 12005*x - 195278886;
> IsIrreducible(frm);
false
> Factorisation(frm);
[
  <x - 19580761848390816306327970759765611 + 0(5^50), 1>,
  <x^4 + (19580761848390816306327970759765611 + 0(5^50))*x^3 +
    (36729080006972869536483353150390576 + 0(5^50))*x^2 -
    (13272304822245302277948107037108689 + 0(5^50))*x -
    2453972756677030937911442361325724 + 0(5^50), 1>
]
1 + 0(5^50)
> Roots(frm);
[ <-1735520224412189269805757267578139 + 0(5^48), 1> ]
> Roots(frm)[1][1];
-1735520224412189269805757267578139 + 0(5^48)
> ResidueField(Roots(frm)[1][1]);

>> ResidueField(Roots(frm)[1][1]);
      ^
Runtime error in 'ResidueField': Bad argument types
Argument types given: FldPadElt

> exitl
> exit;

>> exit;
      ^
User error: bad syntax
> exit;

Total time: 27.190 seconds, Total memory usage: 65.12MB
smp20mk@magma-somas:~$ magma
Magma V2.28-5 Thu Aug 8 2024 14:45:41 on magma-somas [Seed = 2792622502]
Type ? for help. Type <Ctrl>-D to quit.
> Attach("Tim_clusters.m");
> load 'Martin_clusters_ppr2.m';
Loading "Martin_clusters_ppr2.m"

In file "Martin_clusters_ppr2.m", line 22, column 28:
>> return (x+2*c)*frminus(a, c, r, p);
      ^
User error: Identifier 'a' has not been declared or assigned
> exit;

Total time: 0.040 seconds, Total memory usage: 32.09MB
smp20mk@magma-somas:~$ magma
Magma V2.28-5 Thu Aug 8 2024 14:46:26 on magma-somas [Seed = 2876834972]
Type ? for help. Type <Ctrl>-D to quit.
> Attach("Tim_clusters.m");
> load 'Martin_clusters_ppr2.m';
Loading "Martin_clusters_ppr2.m"
> b:=5; c:=7; r:=5; p:=11;
> frp:=frplus(b,c,r,p);
> ClusterPicture(frp, r);
(1,(2,(3,4),(5,6))) d=[19/4,19/4,1/2,0]
>
> for b in [5, 10, 15, 20]
for> do for c in [3, 7, 9, 11]
for|for> do frp:=frplus(b,c,r,p);
for|for> print b,c;
for|for> ClusterPicture(frp, r);
for|for> end for;
for> end for;
5 3

```

```

(6,(1,(2,3),(4,5))) d=[19/4,19/4,1/2,0]
5 7
(1,(2,(3,4),(5,6))) d=[19/4,19/4,1/2,0]
5 9
(1,(2,(3,4),(5,6))) d=[19/4,19/4,1/2,0]
5 11
(6,(1,(2,3),(4,5))) d=[19/4,19/4,1/2,0]
10 3
(6,(1,(2,3),(4,5))) d=[19/4,19/4,1/2,0]
10 7
(1,(2,(3,4),(5,6))) d=[19/4,19/4,1/2,0]
10 9
(1,(2,(3,4),(5,6))) d=[19/4,19/4,1/2,0]
10 11
(6,(1,(2,3),(4,5))) d=[19/4,19/4,1/2,0]
15 3
(6,(1,(2,3),(4,5))) d=[19/4,19/4,1/2,0]
15 7
(1,(2,(3,4),(5,6))) d=[19/4,19/4,1/2,0]
15 9
(1,(2,(3,4),(5,6))) d=[19/4,19/4,1/2,0]
15 11
(6,(1,(2,3),(4,5))) d=[19/4,19/4,1/2,0]
20 3
(6,(1,(2,3),(4,5))) d=[19/4,19/4,1/2,0]
20 7
(1,(2,(3,4),(5,6))) d=[19/4,19/4,1/2,0]
20 9
(1,(2,(3,4),(5,6))) d=[19/4,19/4,1/2,0]
20 11
(6,(1,(2,3),(4,5))) d=[19/4,19/4,1/2,0]
>

```