

```

K = 6;
L = 6;
M = 6;
KLM = Max[K, L, M];
Array[h, K + 1, 0];
Array[b, L + 1, 0];
Array[g, M + 1, 0];
H1 = Sum[h[Abs[i]] * x^(i + KLM), {i, 0, K, 3}] +
      Sum[h[Abs[i]] * x^(i + KLM), {i, -3, -K, -3}];
H2 = Sum[h[Abs[i]] * x^(i + KLM), {i, 2, K, 3}] +
      Sum[h[Abs[i]] * x^(i + KLM), {i, -1, -K, -3}];
H3 = Sum[h[Abs[i]] * x^(i + KLM), {i, 1, K, 3}] +
      Sum[h[Abs[i]] * x^(i + KLM), {i, -2, -K, -3}];
B1 = -Sum[b[Abs[i]] * x^(i + KLM), {i, 0, L, 3}] +
      Sum[b[Abs[i]] * x^(i + KLM), {i, -3, -L, -3}];
B2 = -Sum[b[Abs[i]] * x^(i + KLM), {i, 2, L, 3}] +
      Sum[b[Abs[i]] * x^(i + KLM), {i, -1, -L, -3}];
B3 = -Sum[b[Abs[i]] * x^(i + KLM), {i, 1, L, 3}] +
      Sum[b[Abs[i]] * x^(i + KLM), {i, -2, -L, -3}];
G1 = Sum[g[Abs[i]] * x^(i + KLM), {i, 0, M, 3}] +
      Sum[g[Abs[i]] * x^(i + KLM), {i, -3, -M, -3}];
G2 = Sum[g[Abs[i]] * x^(i + KLM), {i, 2, M, 3}] +
      Sum[g[Abs[i]] * x^(i + KLM), {i, -1, -M, -3}];
G3 = Sum[g[Abs[i]] * x^(i + KLM), {i, 1, M, 3}] +
      Sum[g[Abs[i]] * x^(i + KLM), {i, -2, -M, -3}];
HGDet = {{H1, B1, G1}, {H2, B2, G2}, {H3, B3, G3}};
f = Det[HGDet];
ff = CoefficientList[f, x];
HGDetH = {{1, B1, G1}, {1, B2, G2}, {1, B3, G3}};
fh = Det[HGDetH];
ffh = CoefficientList[fh, x];
Length[ffh];
HGDetB = {{H1, 1, G1}, {H2, 1, G2}, {H3, 1, G3}};
fb = Det[HGDetB];
ffb = CoefficientList[fb, x];
HGDetG = {{H1, B1, 1}, {H2, B2, 1}, {H3, B3, 1}};
fg = Det[HGDetG];
ffg = CoefficientList[fg, x];
K1 = Length[ffh] / 2 - 1;
Array[kh, K1 + 1, 0];
For[i = K1 + 1; j = Length[ffh], i > 0, i--; j--, kh[i - 1] = -ffh[[j]]];
M1 = Length[ffg] / 2 - 1;
Array[kg, M1 + 1, 0];
For[i = M1 + 1; j = Length[ffg], i > 0, i--; j--, kg[i - 1] = -ffg[[j]]];

```

```

L1 = Length[ffb] / 2 - 1;
Array[kb, L1 + 1, 0];
For[i = L1 + 1; j = Length[ffb], i > 0, i--; j--, kb[i - 1] = -ffb[[j]]];
Print["(K, L, M)      = (", K, ", ", L, ", ",
      M, ")  (", 2 * K + 1, ", ", 2 * L + 1, ", ", 2 * M + 1, ")"]
Print["(K1, L1, M1) = (", K1, ", ", L1, ", ", M1,
      ")  (", 2 * K1 + 1, ", ", 2 * L1 + 1, ", ", 2 * M1 + 1, ")"]
Print["Длина детерминанта - ", Length[ff]]
Print["Середина детерминанта, равная 1, - ", Length[ff] / 2 - 2]
Print["Количество уравнений - ", K + L + M + 3]

```

(K, L, M) = (6, 6, 6) (13, 13, 13)

(K1, L1, M1) = (11, 11, 11) (23, 23, 23)

Длина детерминанта - 34

Середина детерминанта, равная 1, - 15

Количество уравнений - 21

```

s = 2^(2/3);
aa = 0.07;
NSLv = NSolve[{
  b[0] == 0,
  ff[Length[ff]] == 0,
  ff[Length[ff] - 3] == 0,
  ff[Length[ff] - 6] == 0,
  ff[Length[ff] - 9] == 0,
  ff[Length[ff] - 12] == 0,
  ff[Length[ff] - 15] == -1,

  Sum[h[Abs[i]] * (-1)^i, {i, -K, K}] == 0,
  (*Sum[g[Abs[i]], {i, -M, M}] == 0, *)
  Sum[kh[Abs[i]], {i, -K1, K1}] == s,
  Sum[kh[Abs[i]] * (-1)^i, {i, -K1, K1}] == 0,
  Sum[kg[Abs[i]], {i, -M1, M1}] == 0,
  Sum[kg[Abs[i]] * (-1)^i, {i, -M1, M1}] == s,

  Sum[i^2 * kh[i], {i, 1, K1}] == 0,
  Sum[i^4 * kh[i], {i, 1, K1}] == 0,
  Sum[i^2 * kh[i] * (-1)^(i - 1), {i, 1, K1}] == 0,
  Sum[i^4 * kh[i] * (-1)^(i - 1), {i, 1, K1}] == 0,

  Sum[i^2 * kg[i], {i, 1, M1}] == 0,
  Sum[i^2 * kg[i] * (-1)^(i - 1), {i, 1, M1}] == 0,

  Sum[i * kb[i], {i, 1, L1}] == 0,
  (*Sum[i^3 * kb[i], {i, 1, L1}] == 0, *)
  Sum[i * kb[i] * (-1)^(i - 1), {i, 1, L1}] == 0,
  (*Sum[i * kb[i] * Cos[Pi * i * 0.65], {i, 1, L1}] == 0, *)
  (*Sum[kb[i] * Sin[Pi * i * 0.7], {i, 1, L1}] == s/2, *)

  (h[0] * g[0] + 2 * h[1] * g[1])^2 -
  aa^2 * Sum[h[Abs[i]]^2, {i, -K, K}] * Sum[g[Abs[i]]^2, {i, -M, M}] == 0
}(*, Reals*))];
Print["Количество решений - ", Length[NSLv]]

```

Количество решений - 44

```

ph = 100 * (h[0] + 2 * Sum[h[i] * Cos[Pi * i * x], {i, 1, K}]);
pb = 100 * 2 * Sum[b[i] * Sin[Pi * i * x], {i, 1, L}];
pg = 100 * (g[0] + 2 * Sum[g[i] * Cos[Pi * i * x], {i, 1, M}]);
pkh = 100 * (kh[0] + 2 * Sum[kh[i] * Cos[Pi * i * x], {i, 1, K1}]);
pkb = 100 * 2 * Sum[kb[i] * Sin[Pi * i * x], {i, 1, L1}];
pkg = 100 * (kg[0] + 2 * Sum[kg[i] * Cos[Pi * i * x], {i, 1, M1}]);
pkhh = ph * pkh / 300;
pkbb = pb * pkb / 300;
pkgg = pg * pkg / 300;

Do[Print[kk];
  ssh = Sqrt[Sum[(h[Abs[i]] /. NSLv[[kk]])^2, {i, -K, K}]];
  ssb = Sqrt[Sum[(b[Abs[i]] /. NSLv[[kk]])^2, {i, -L, L}]];
  ssg = Sqrt[Sum[(g[Abs[i]] /. NSLv[[kk]])^2, {i, -M, M}]];
  Print[(h[0] /. NSLv[[kk]]) * (g[0] /. NSLv[[kk]]) +
    2 * (h[1] /. NSLv[[kk]]) * (g[1] /. NSLv[[kk]]) / (ssh * ssg)];
  Print[Sum[(h[i] /. NSLv[[kk]])^2, {i, 2, K}] /
    ((h[0] /. NSLv[[kk]])^2 + 2 * (h[1] /. NSLv[[kk]])^2)];
  Print[Sum[(b[i] /. NSLv[[kk]])^2, {i, 2, L}] /
    ((b[0] /. NSLv[[kk]])^2 + 2 * (b[1] /. NSLv[[kk]])^2)];
  Print[Sum[(g[i] /. NSLv[[kk]])^2, {i, 2, M}] /
    ((g[0] /. NSLv[[kk]])^2 + 2 * (g[1] /. NSLv[[kk]])^2)];
  Print[Plot[{ph /. NSLv[[kk]], pb /. NSLv[[kk]], pg /. NSLv[[kk]]},
    {x, 0, 1}, AxesLabel -> {"x", "y"},
    LabelStyle -> Directive[FontFamily -> "Times", FontSize -> 12],
    PlotStyle -> {Thickness[0.01]}, ImageSize -> Medium],
    Plot[{pkh /. NSLv[[kk]], pkb /. NSLv[[kk]], pkg /. NSLv[[kk]]},
    {x, 0, 1}, AxesLabel -> {"x", "y"},
    LabelStyle -> Directive[FontFamily -> "Times", FontSize -> 12],
    PlotStyle -> {Thickness[0.01]}, ImageSize -> Medium], {kk, Length[NSLv]}]
(*kk=14;
Plot[{ph /. NSLv[[kk]], pb /. NSLv[[kk]], pg /. NSLv[[kk]]}, {x, 0, 1}, AxesLabel -> {"x", "y"},
  LabelStyle -> Directive[FontFamily -> "Times", FontSize -> 12],
  PlotStyle -> {Thickness[0.01]}]
Plot[{pkh /. NSLv[[kk]], pkb /. NSLv[[kk]], pkg /. NSLv[[kk]]},
  {x, 0, 1}, AxesLabel -> {"x", "y"},
  LabelStyle -> Directive[FontFamily -> "Times", FontSize -> 12],
  PlotStyle -> {Thickness[0.01]}]
Plot[{pkhh /. NSLv[[kk]], pkbb /. NSLv[[kk]], pkgg /. NSLv[[kk]],
  (pkhh + pkbb + pkgg) /. NSLv[[kk]]}, {x, 0, 1}, AxesLabel -> {"x", "y"},
  LabelStyle -> Directive[FontFamily -> "Times", FontSize -> 12],
  PlotStyle -> {Thickness[0.01]}] *)

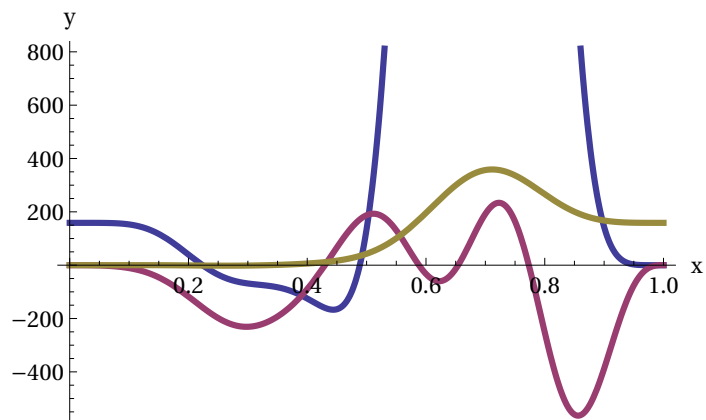
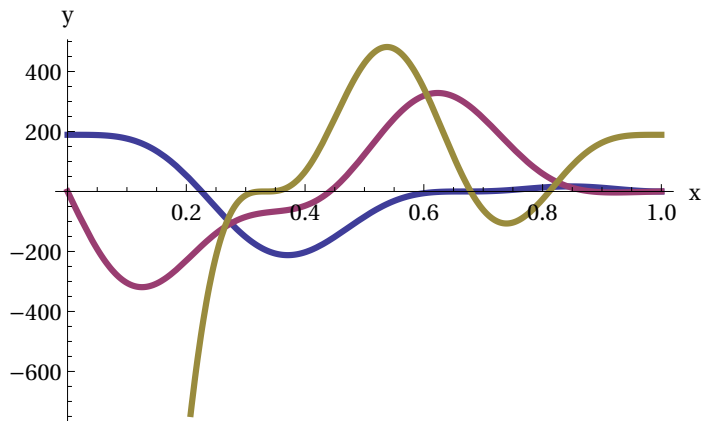
```

-0.07

13.5489

7.92563

0.521569



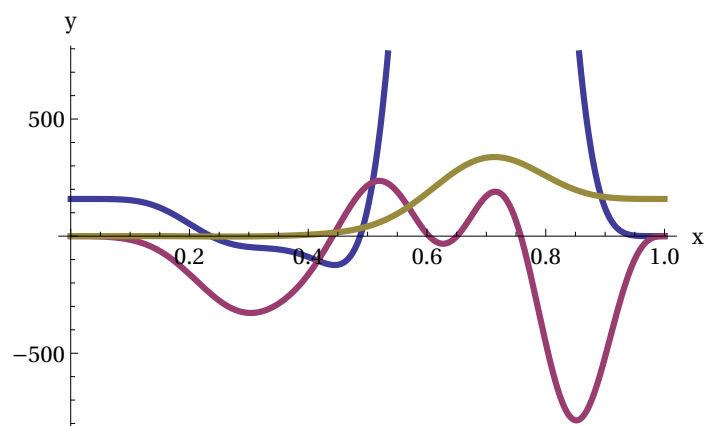
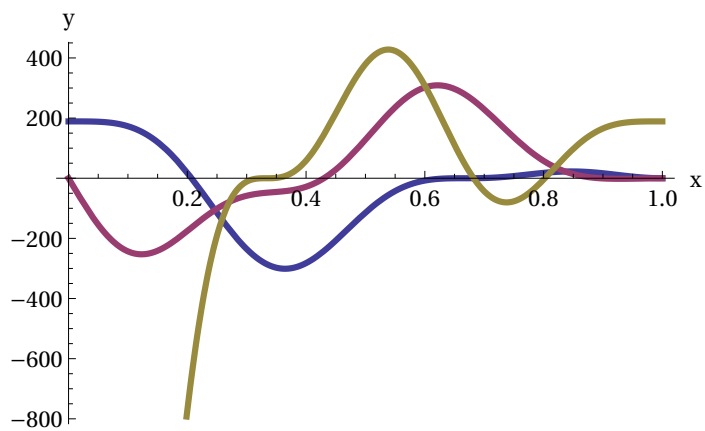
2

0.07

9.07683

3.90701

0.515965



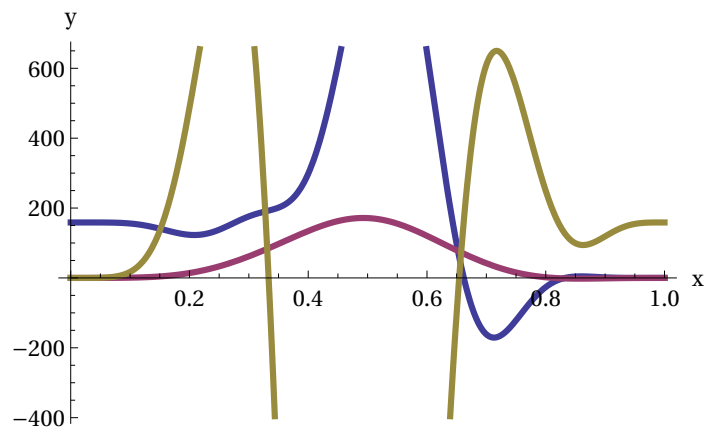
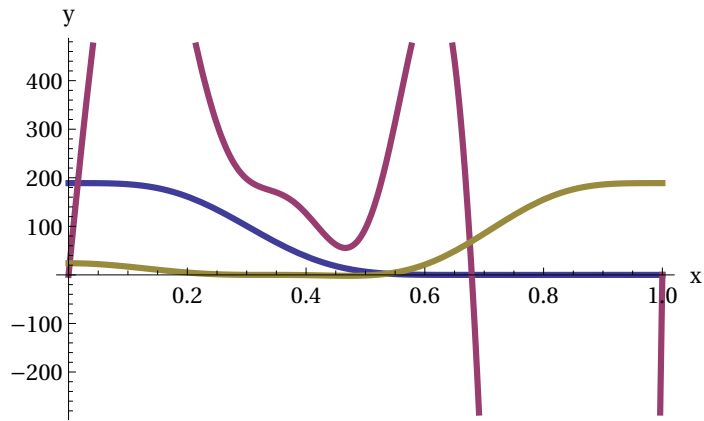
3

-0.07

0.0687303

11.6325

0.119337



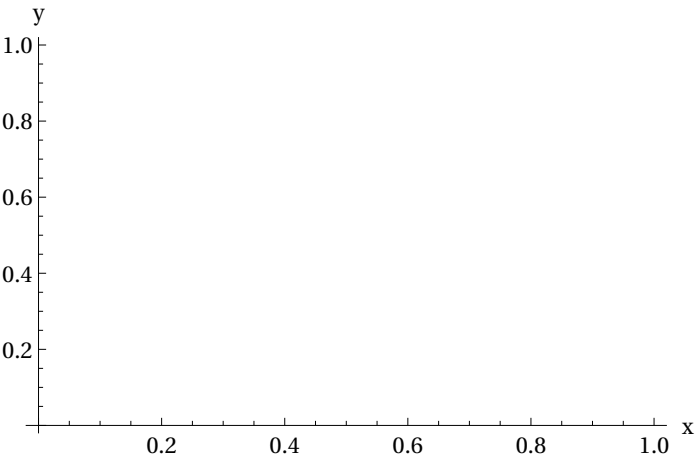
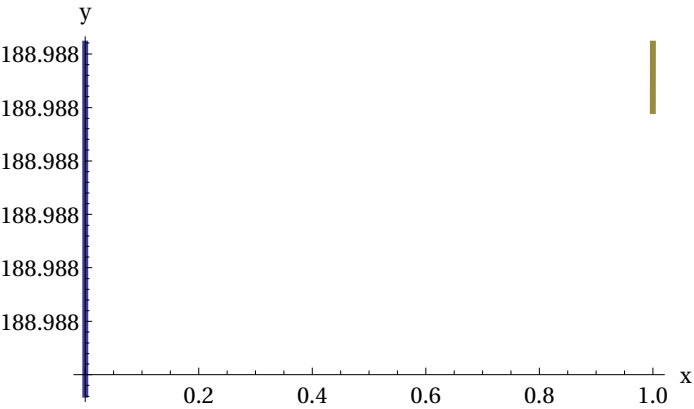
4

$$-0.07 - 5.82029 \times 10^{-14} i$$

$$0.0788166 - 0.005875 i$$

$$-0.245668 - 5.45293 i$$

$$0.0644584 + 0.00986061 i$$



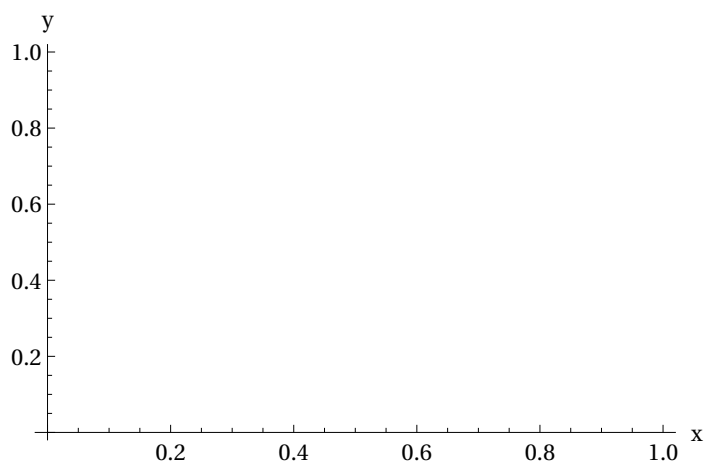
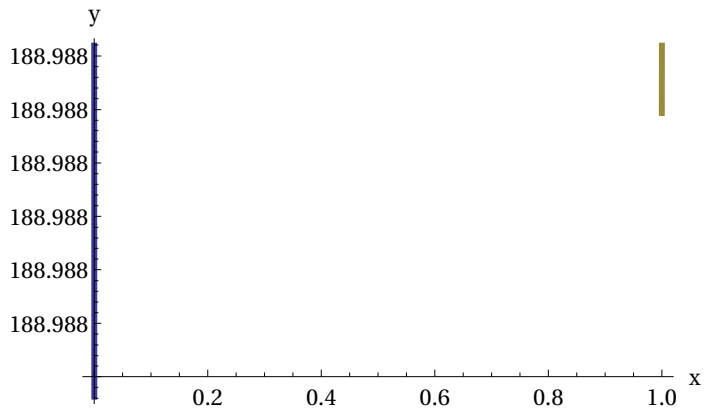
5

$$-0.07 + 5.82029 \times 10^{-14} i$$

$$0.0788166 + 0.005875 i$$

$$-0.245668 + 5.45293 i$$

$$0.0644584 - 0.00986061 i$$



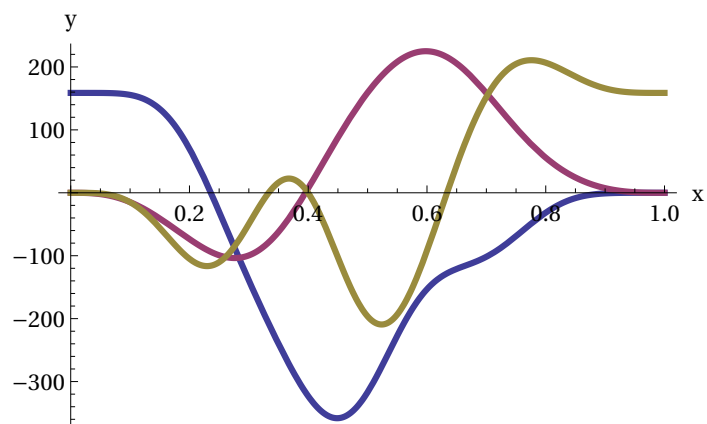
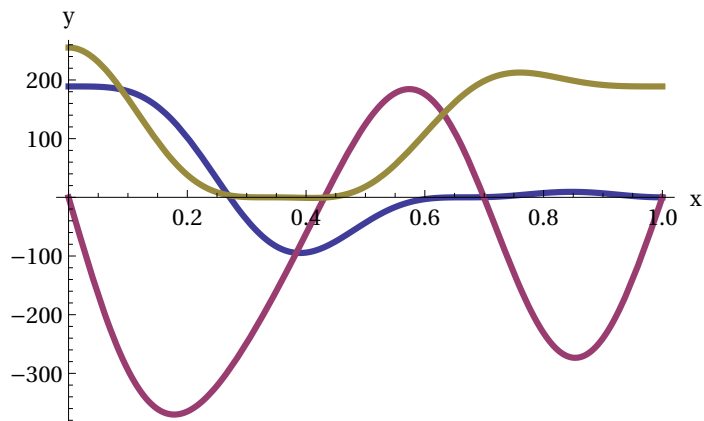
6

0.07

1.25458

4.21551

0.213954



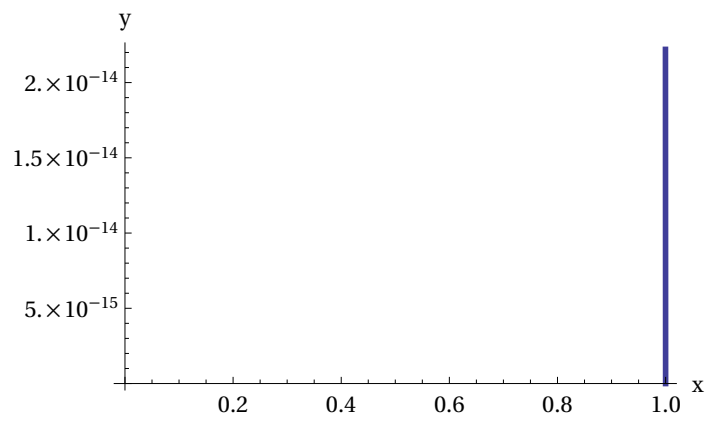
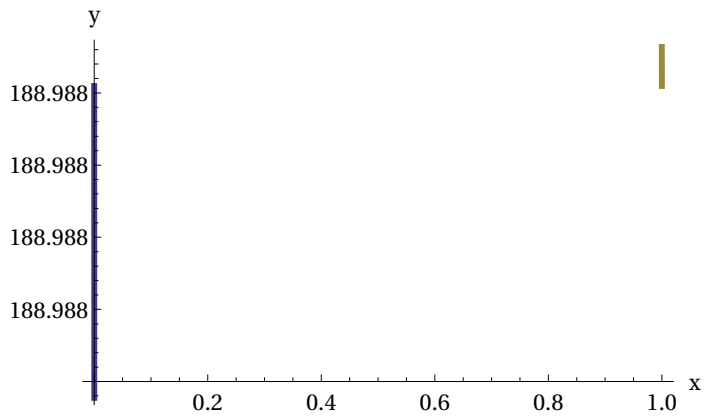
7

$$0.07 - 1.02431 \times 10^{-14} i$$

$$0.685413 - 0.135149 i$$

$$8.67578 + 10.3224 i$$

$$0.170606 - 0.00593296 i$$



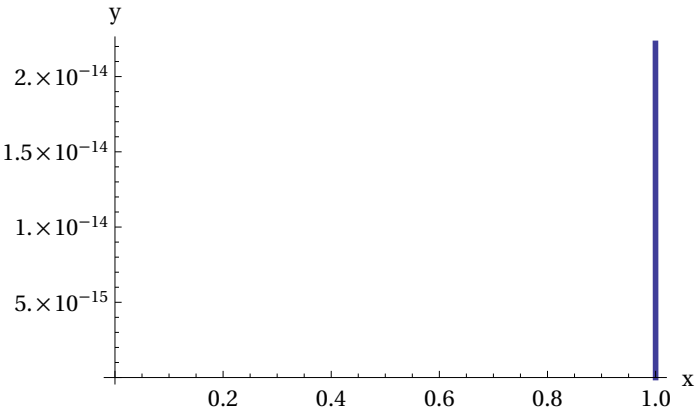
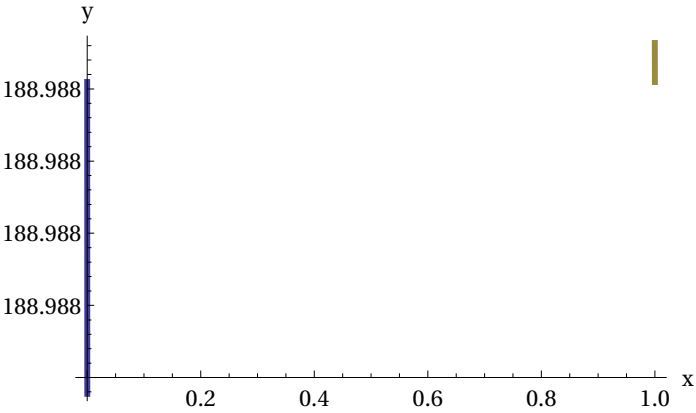
8

$$0.07 + 1.02431 \times 10^{-14} i$$

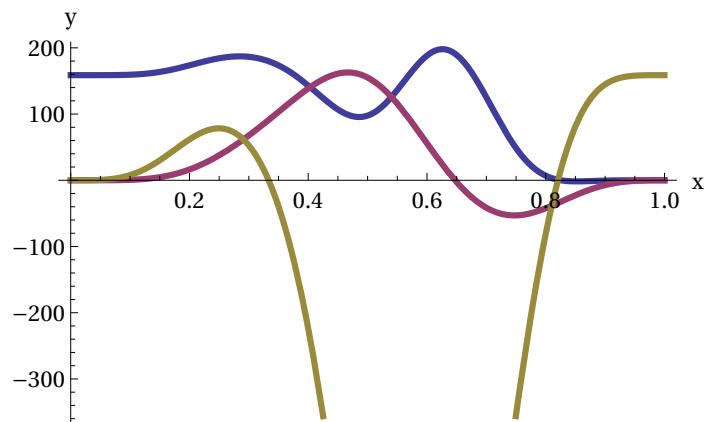
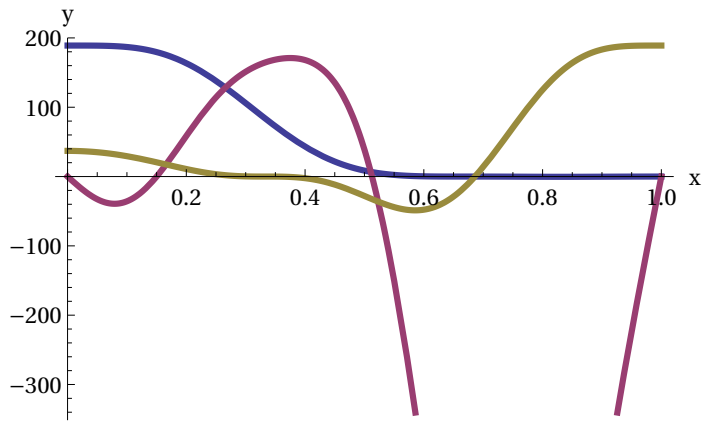
$$0.685413 + 0.135149 i$$

$$8.67578 - 10.3224 i$$

$$0.170606 + 0.00593296 i$$



9
-0.07
0.061965
1.91341
0.532592



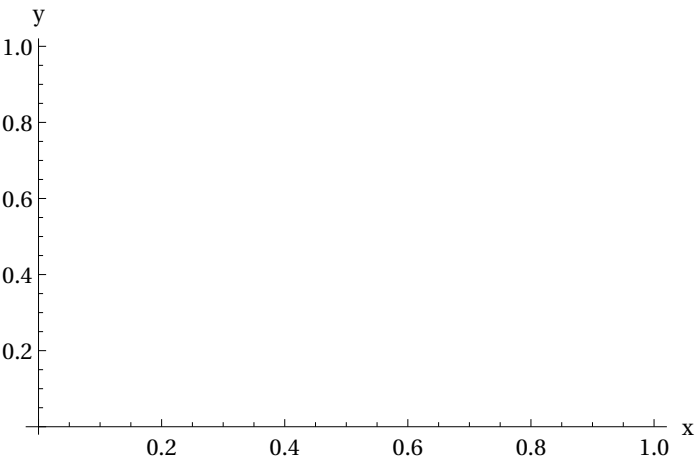
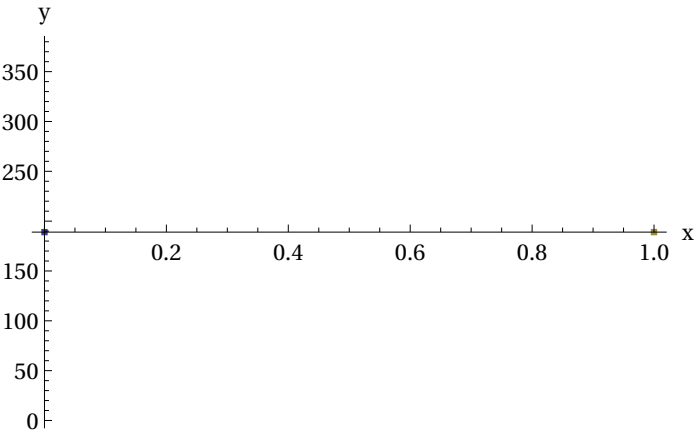
10

$$-0.07 - 1.0894 \times 10^{-12} i$$

$$-0.190102 - 0.124079 i$$

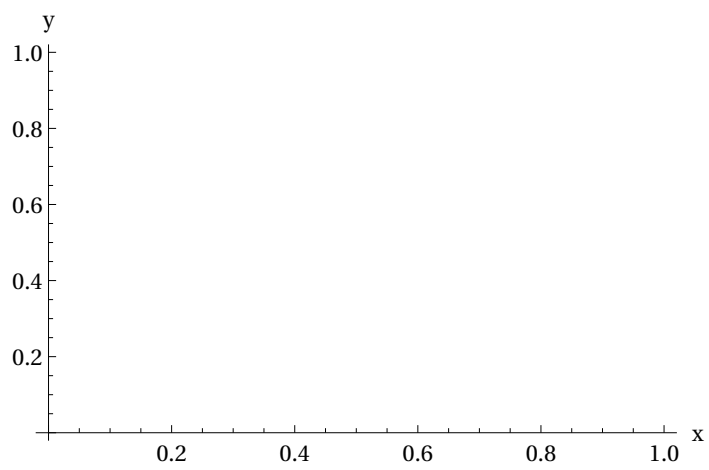
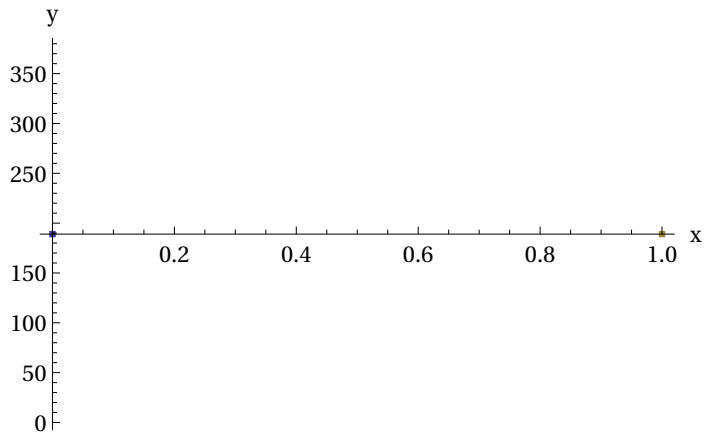
$$3.87225 + 2.39223 i$$

$$0.0620974 - 0.0125445 i$$



11

$-0.07 + 1.0894 \times 10^{-12} i$
 $-0.190102 + 0.124079 i$
 $3.87225 - 2.39223 i$
 $0.0620974 + 0.0125445 i$



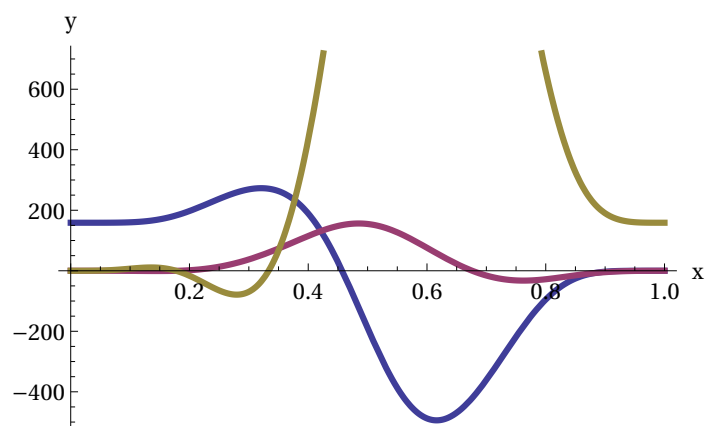
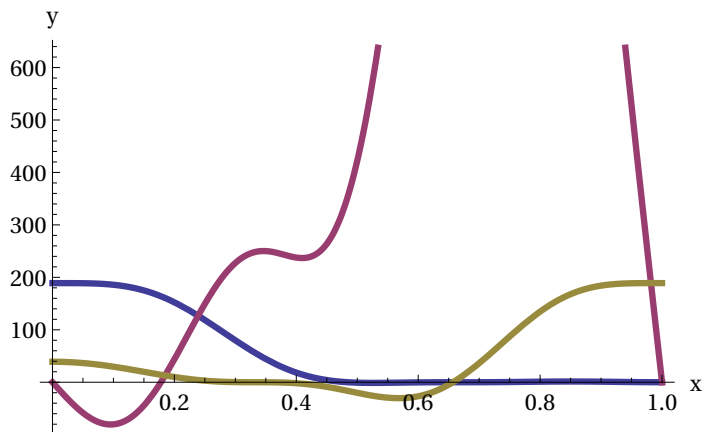
12

-0.07

0.105667

0.557847

0.34611



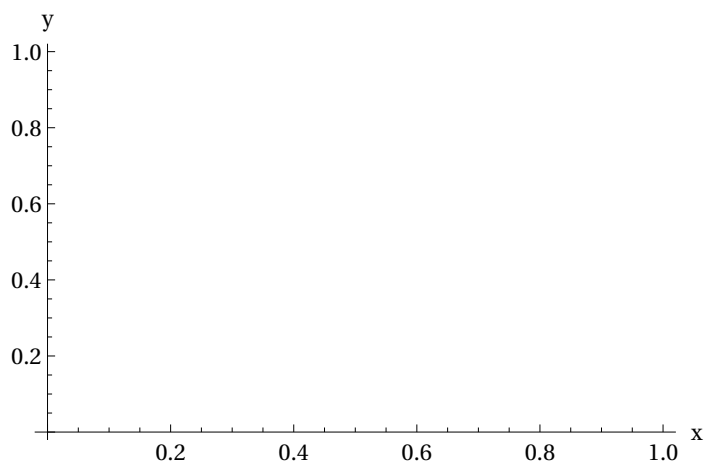
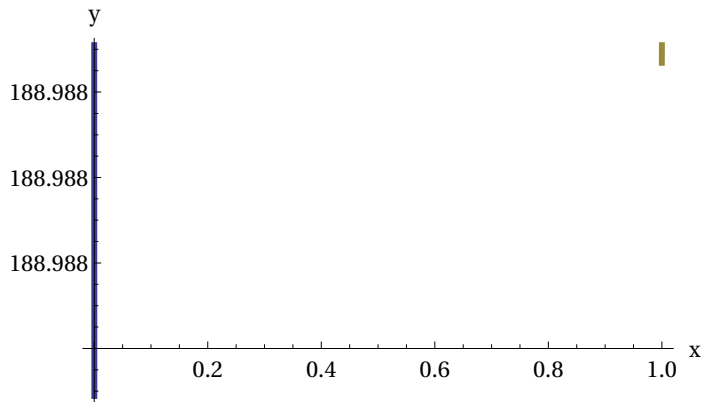
13

$$0.07 - 6.05765 \times 10^{-14} i$$

$$0.0613942 + 0.00148622 i$$

$$-0.115317 + 2.18647 i$$

$$0.56732 - 1.15086 i$$



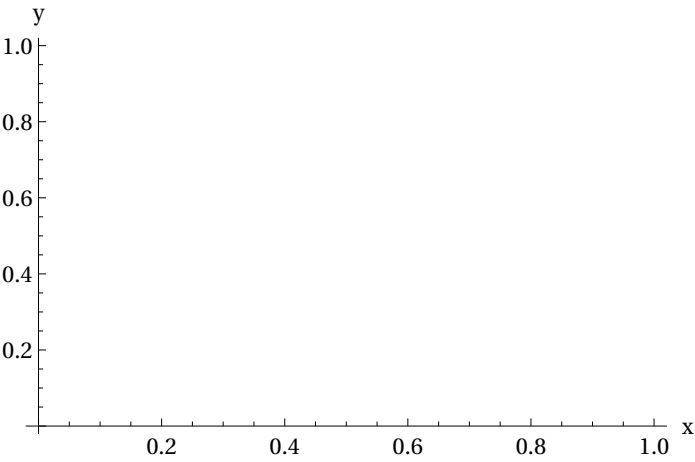
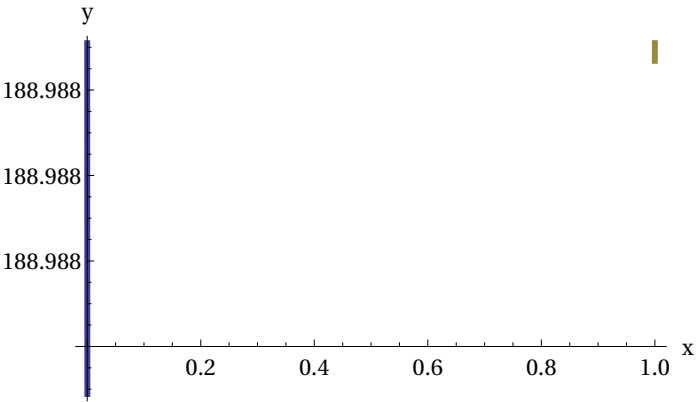
14

$$0.07 + 6.05765 \times 10^{-14} i$$

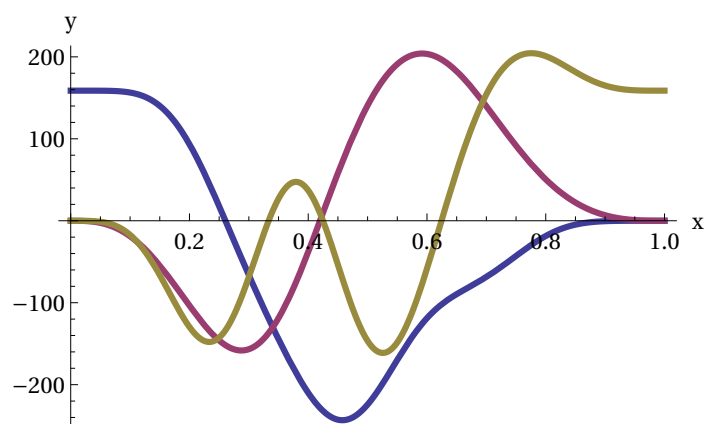
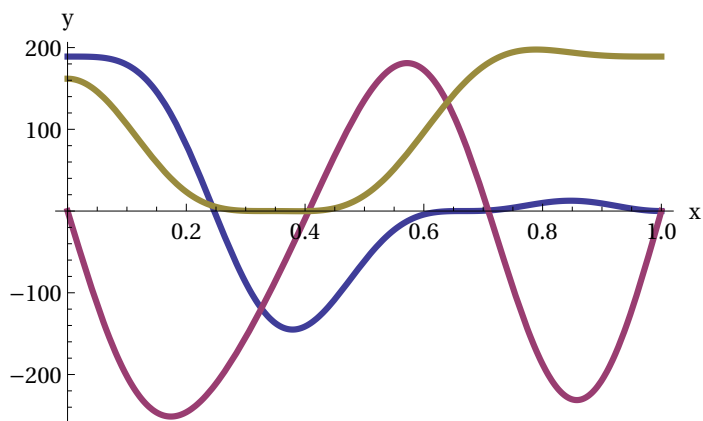
$$0.0613942 - 0.00148622 i$$

$$-0.115317 - 2.18647 i$$

$$0.56732 + 1.15086 i$$



15
-0.07
3.78527
15.3381
0.139878



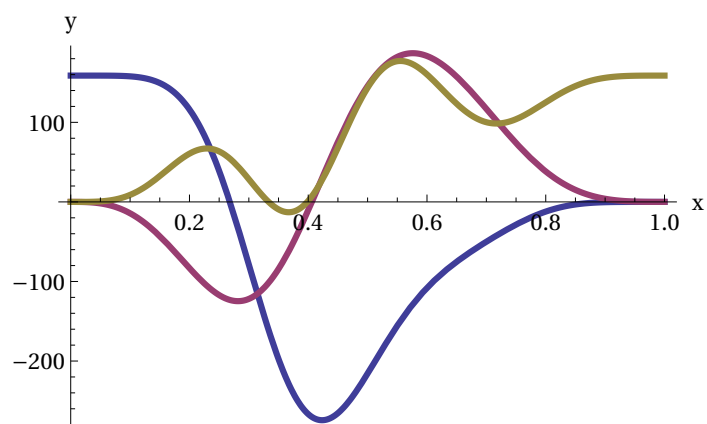
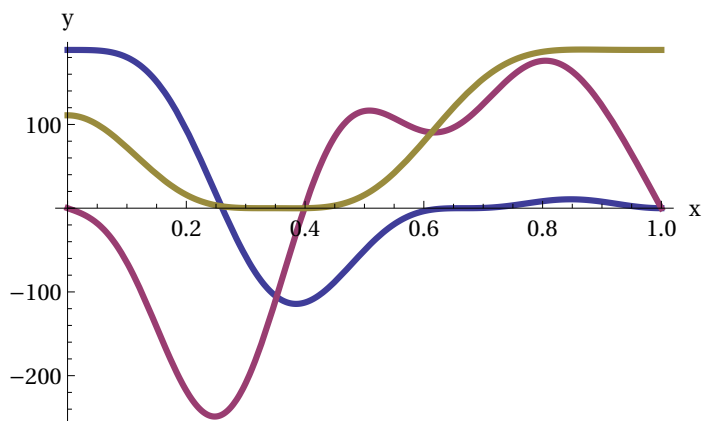
16

-0.07

1.91585

25.6461

0.108865



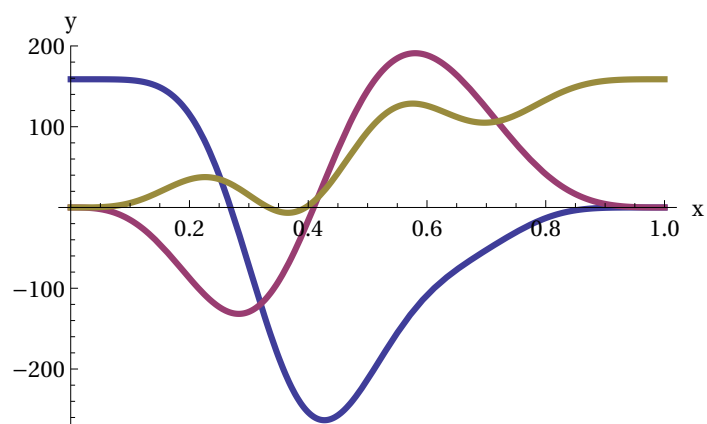
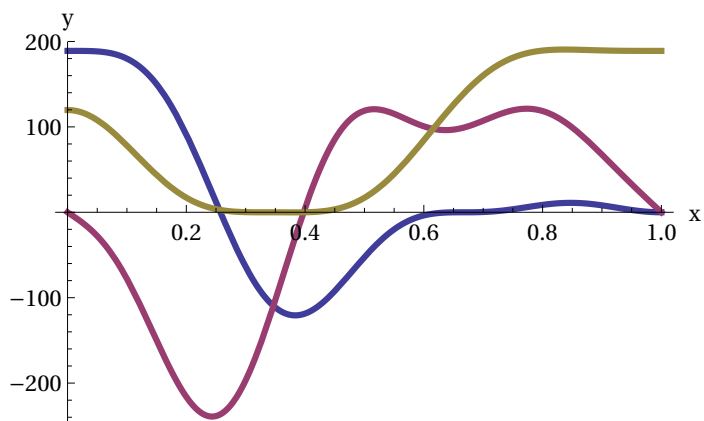
17

-0.07

2.20507

48.1282

0.112399



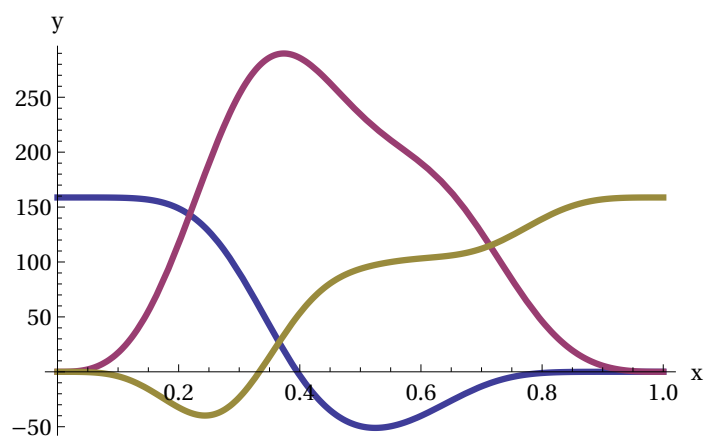
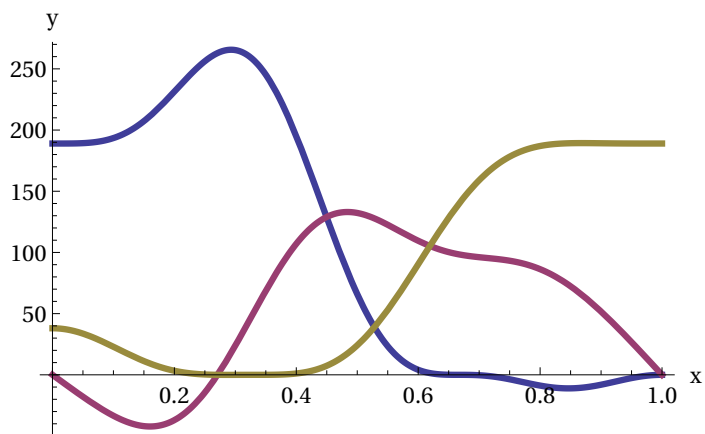
18

0.07

0.0451775

0.217341

0.0475755



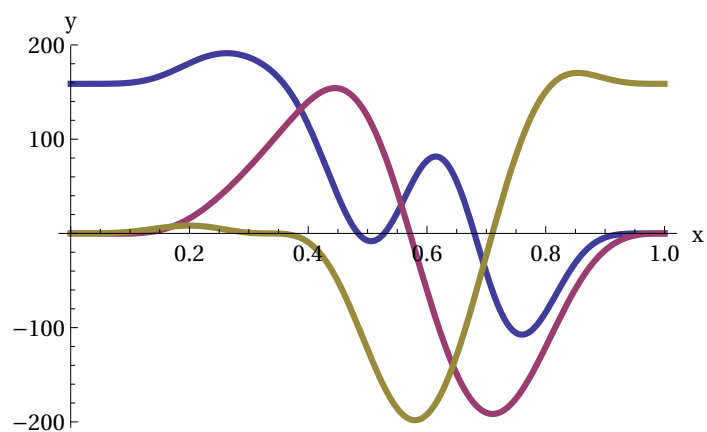
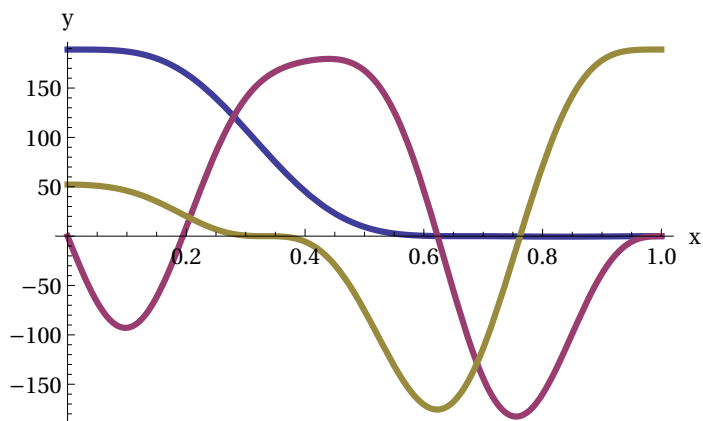
19

-0.07

0.059386

5.10306

15.8234



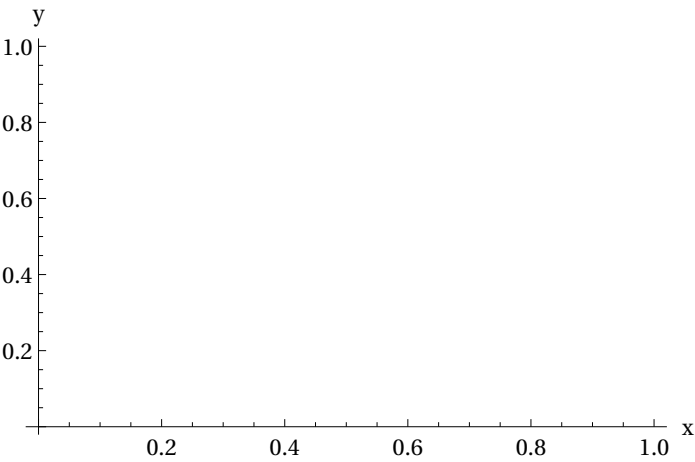
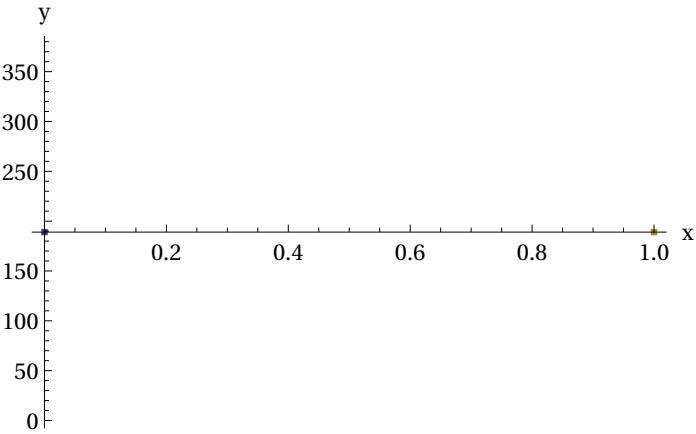
20

$$-0.07 - 8.39393 \times 10^{-13} i$$

$$-0.0256529 - 0.563979 i$$

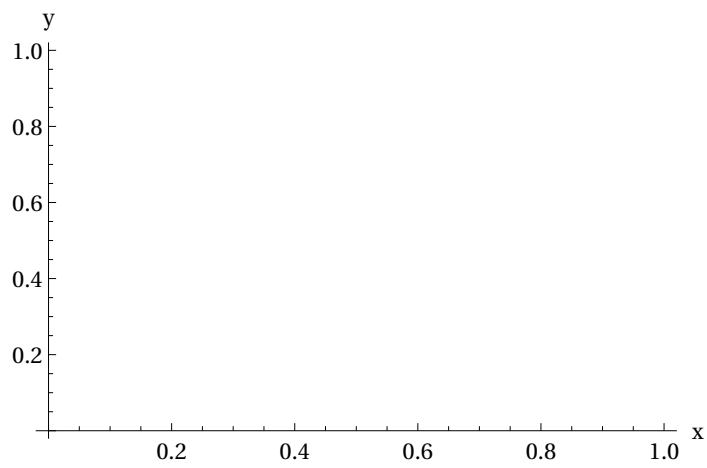
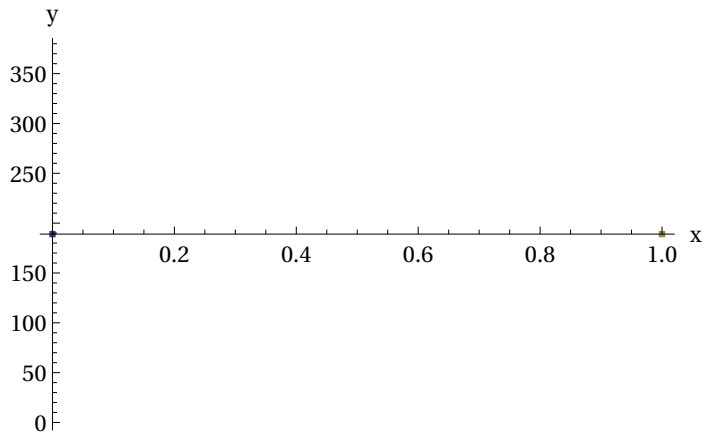
$$-2.29479 + 1.84237 i$$

$$0.0921963 + 0.0113623 i$$



21

-0.07 + 8.39393 × 10⁻¹³ i
-0.0256529 + 0.563979 i
-2.29479 - 1.84237 i
0.0921963 - 0.0113623 i



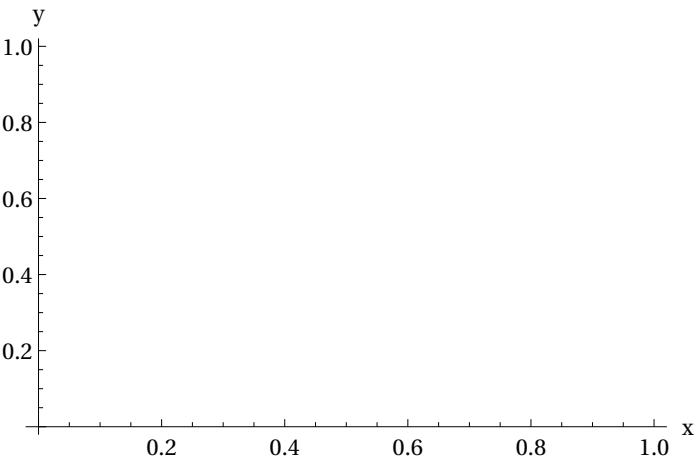
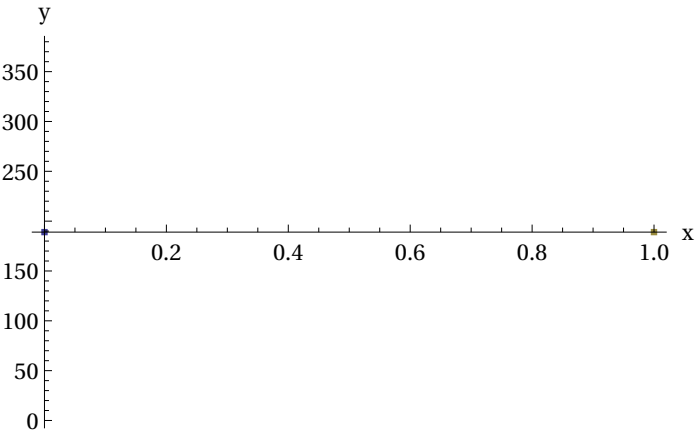
22

$$0.07 + 1.48014 \times 10^{-12} i$$

$$-0.150537 - 0.0944375 i$$

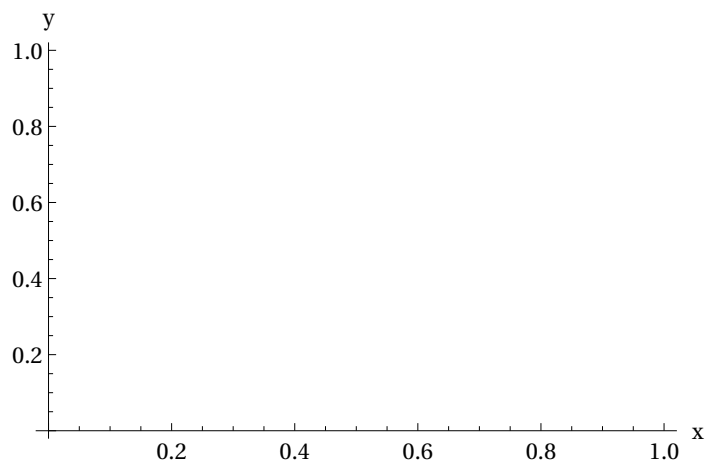
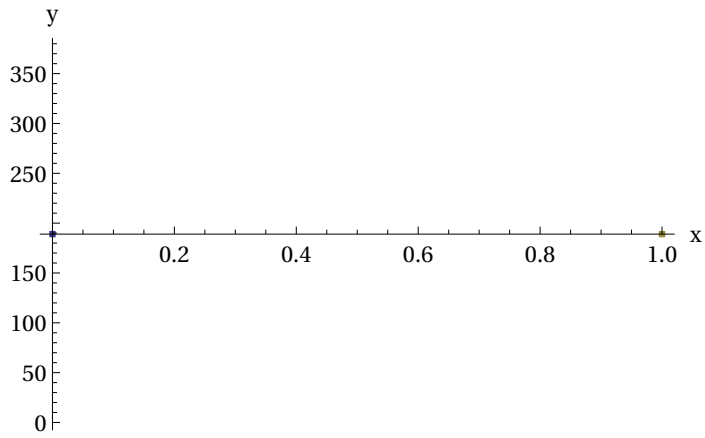
$$-0.405118 + 0.758541 i$$

$$0.069843 + 0.0403826 i$$



23

$$\begin{aligned} &0.07 - 1.48014 \times 10^{-12} i \\ &-0.150537 + 0.0944375 i \\ &-0.405118 - 0.758541 i \\ &0.069843 - 0.0403826 i \end{aligned}$$



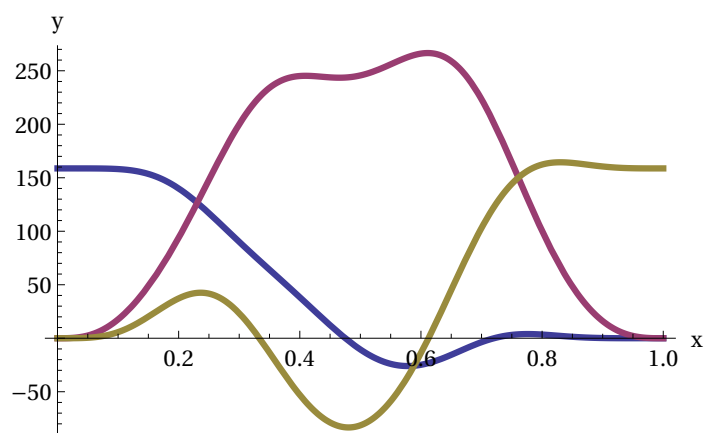
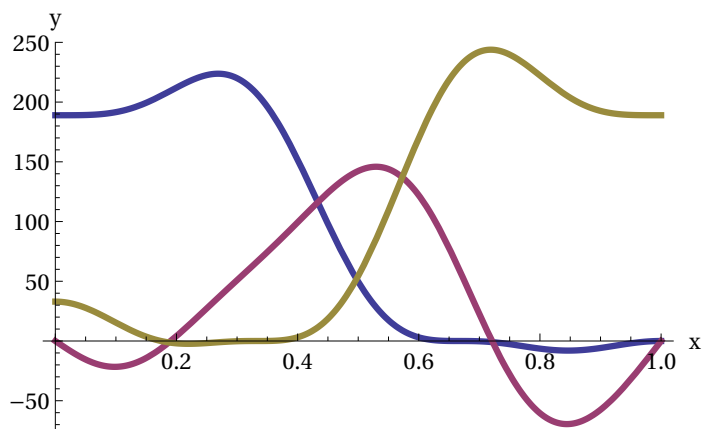
24

0.07

0.0312047

0.603888

0.0460531



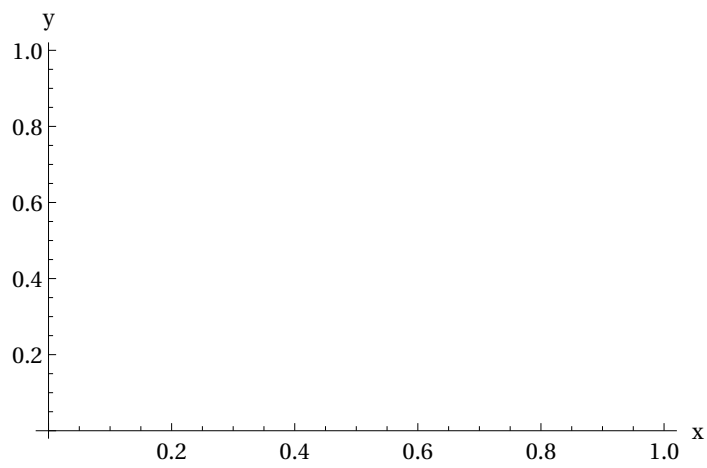
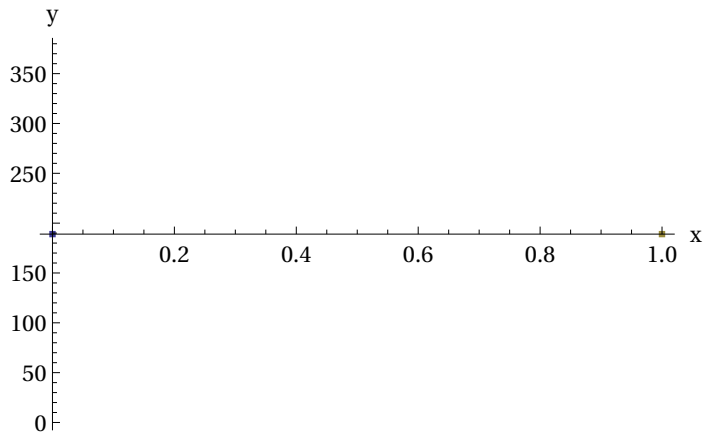
25

$$-0.07 - 1.81911 \times 10^{-11} i$$

$$-0.129118 - 0.705141 i$$

$$5.87198 + 3.33206 i$$

$$0.0530779 - 0.00416414 i$$



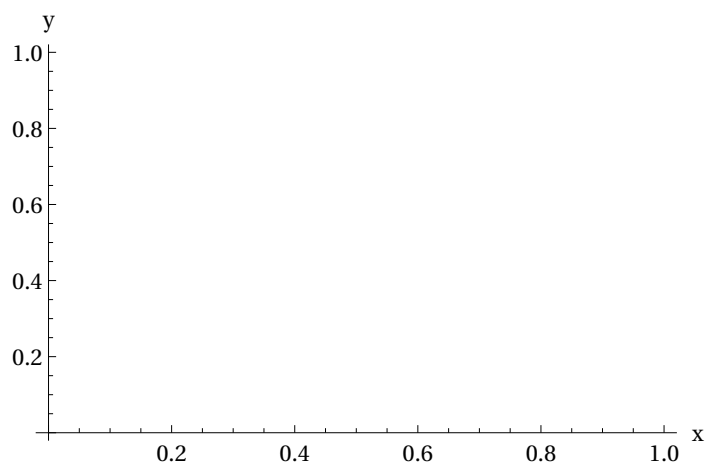
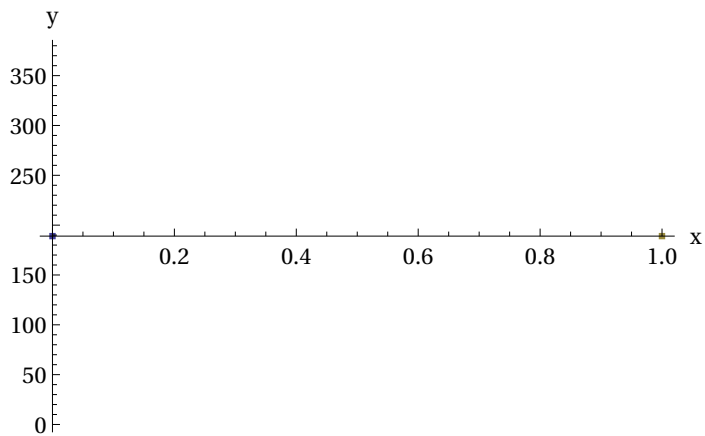
26

$$-0.07 + 1.81911 \times 10^{-11} i$$

$$-0.129118 + 0.705141 i$$

$$5.87198 - 3.33206 i$$

$$0.0530779 + 0.00416414 i$$



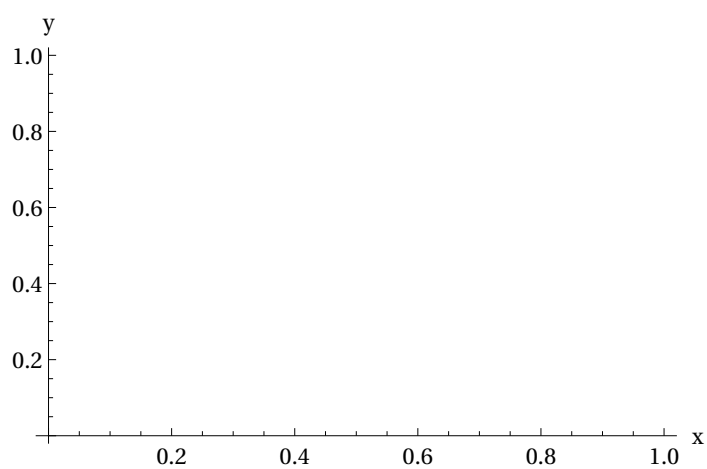
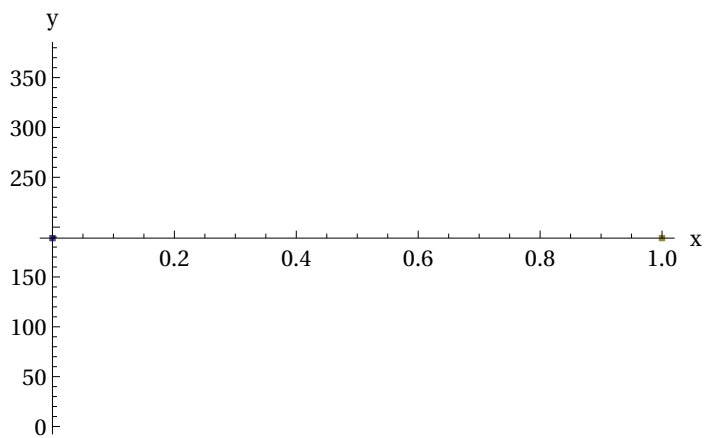
27

$$0.07 - 2.26662 \times 10^{-13} i$$

$$0.0222128 + 0.0000108068 i$$

$$0.163343 - 0.130832 i$$

$$0.0249919 - 0.00729187 i$$



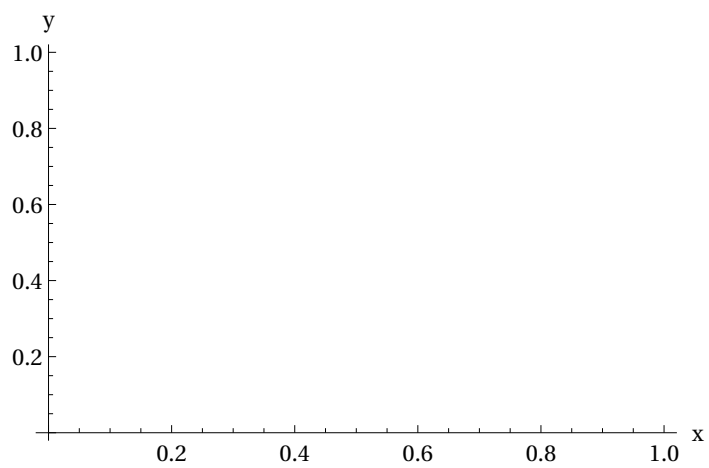
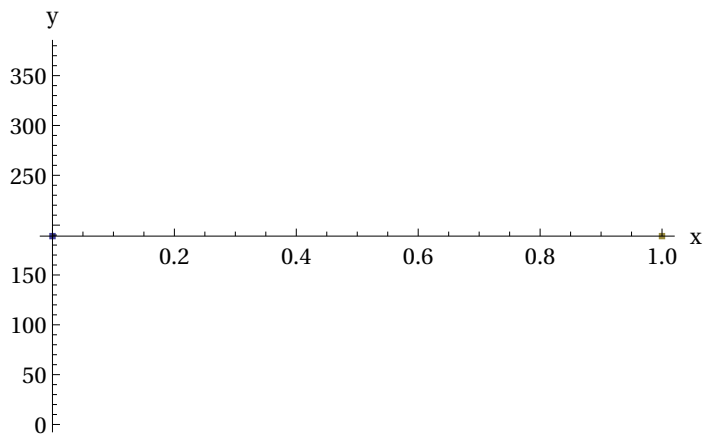
28

$$0.07 + 2.26662 \times 10^{-13} i$$

$$0.0222128 - 0.0000108068 i$$

$$0.163343 + 0.130832 i$$

$$0.0249919 + 0.00729187 i$$



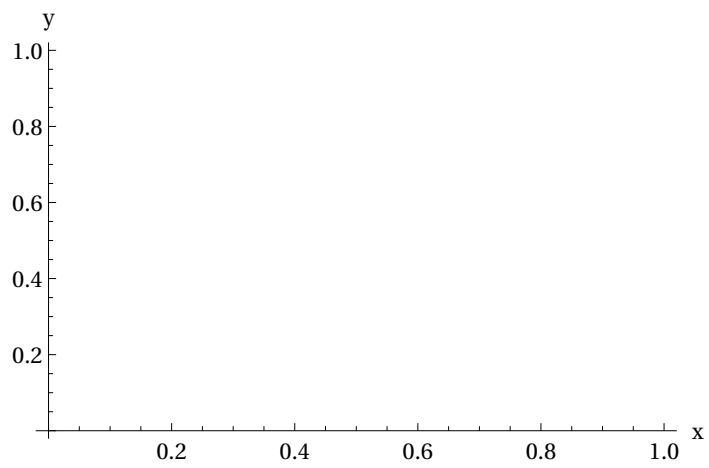
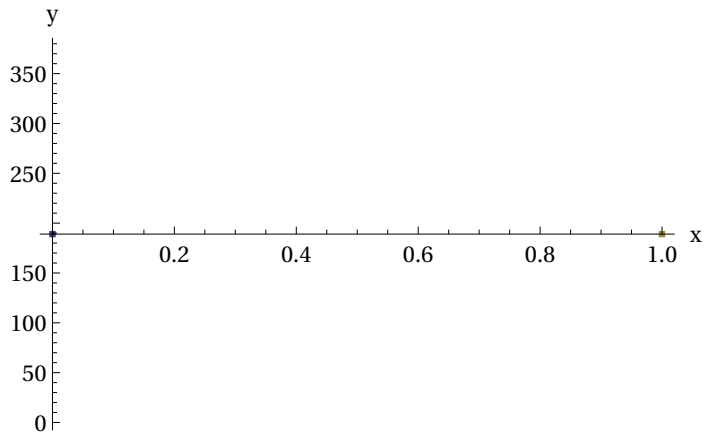
29

$$0.07 + 4.42293 \times 10^{-13} i$$

$$0.0694416 - 0.0160248 i$$

$$-0.0717171 - 0.65881 i$$

$$0.102915 + 0.0467197 i$$



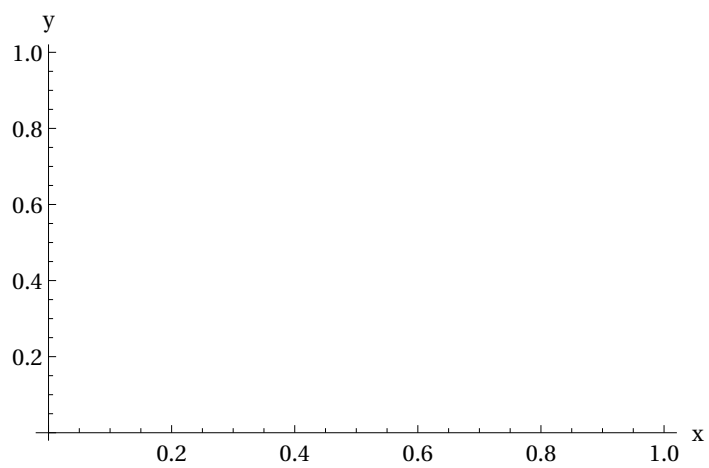
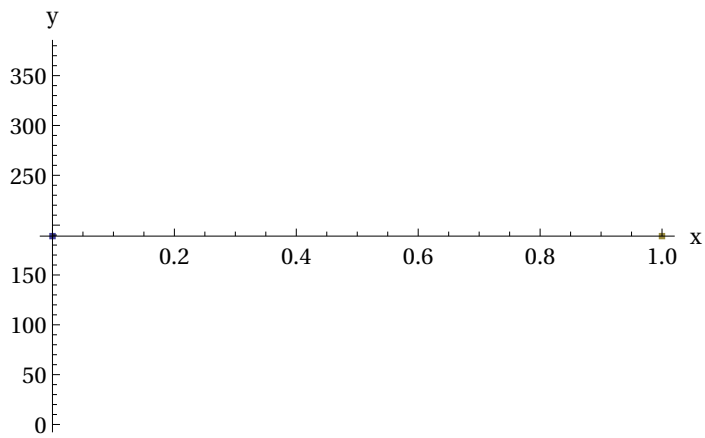
30

$$0.07 - 4.42293 \times 10^{-13} i$$

$$0.0694416 + 0.0160248 i$$

$$-0.0717171 + 0.65881 i$$

$$0.102915 - 0.0467197 i$$



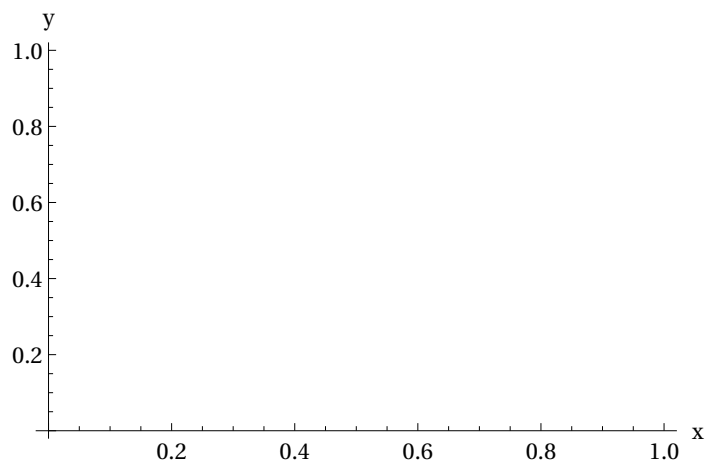
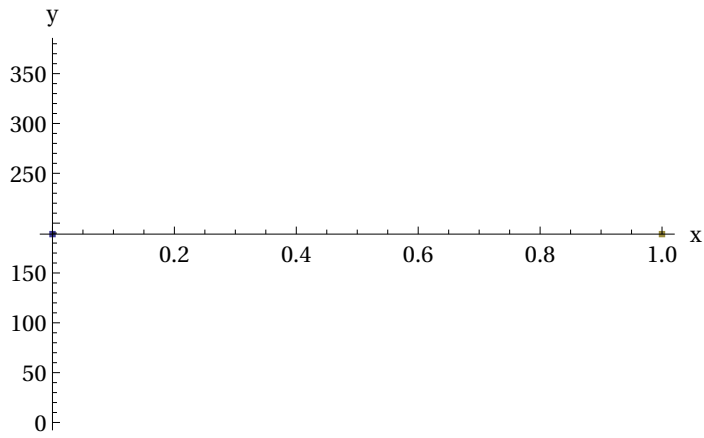
31

$$0.07 + 8.25845 \times 10^{-13} i$$

$$0.0526158 - 0.0599561 i$$

$$-0.442385 - 0.0923564 i$$

$$0.110892 + 0.0743243 i$$



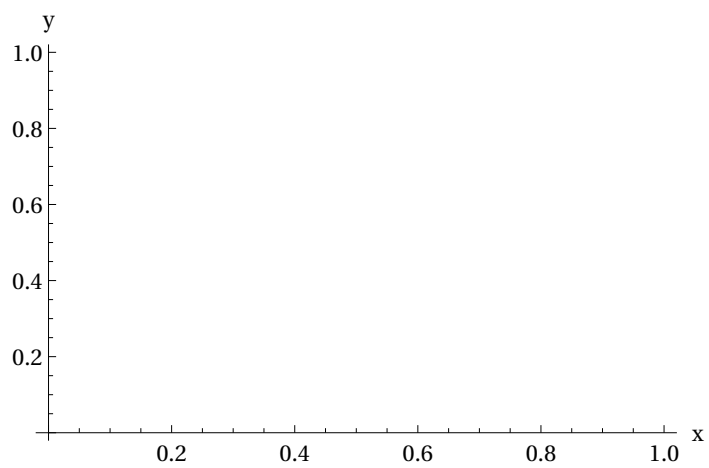
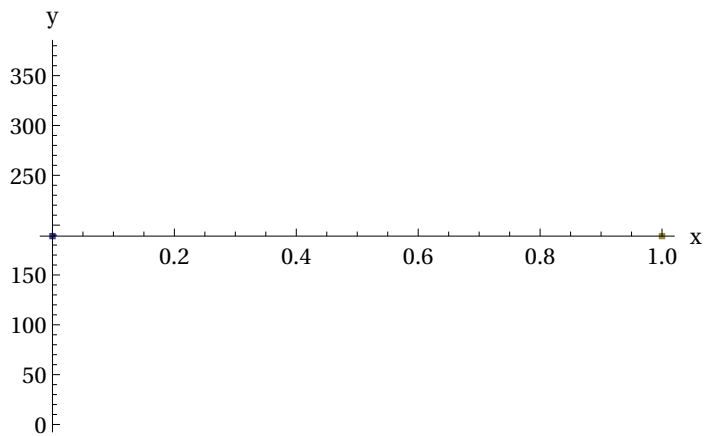
32

$$0.07 - 8.25845 \times 10^{-13} i$$

$$0.0526158 + 0.0599561 i$$

$$-0.442385 + 0.0923564 i$$

$$0.110892 - 0.0743243 i$$



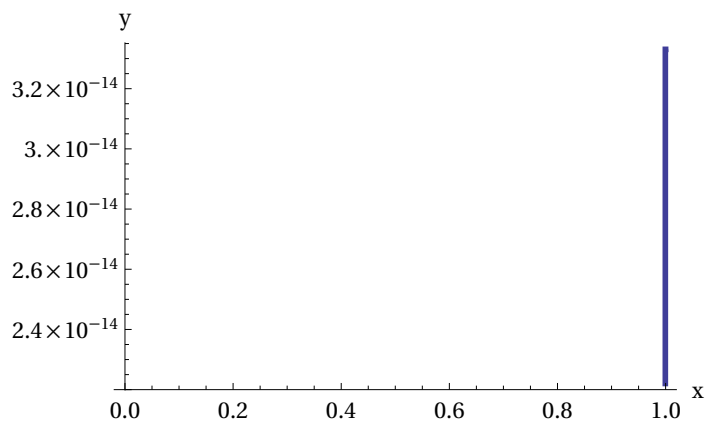
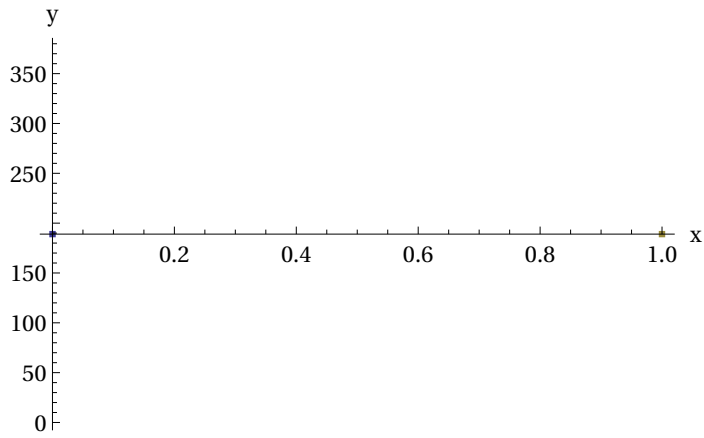
33

$$0.07 - 1.58931 \times 10^{-12} i$$

$$0.0482089 - 0.0168068 i$$

$$-1.46514 - 0.384491 i$$

$$-0.0430713 + 0.647121 i$$



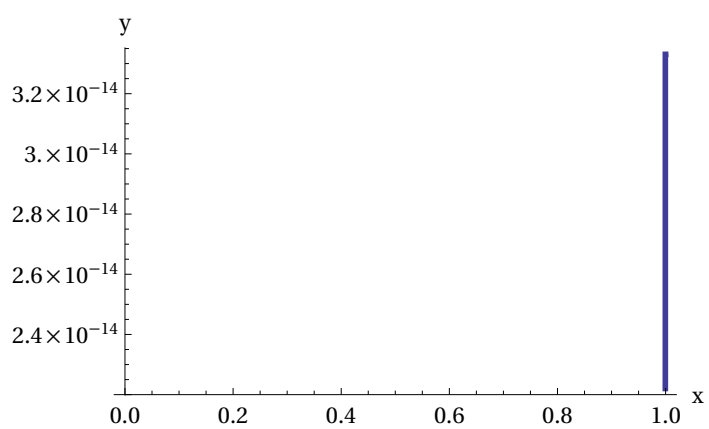
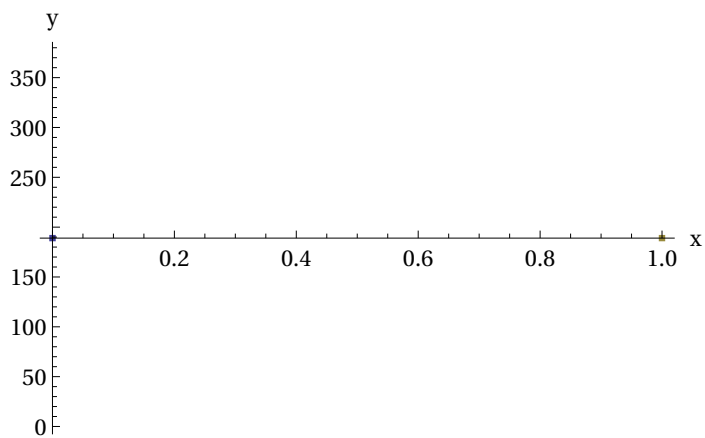
34

$$0.07 + 1.58931 \times 10^{-12} i$$

$$0.0482089 + 0.0168068 i$$

$$-1.46514 + 0.384491 i$$

$$-0.0430713 - 0.647121 i$$



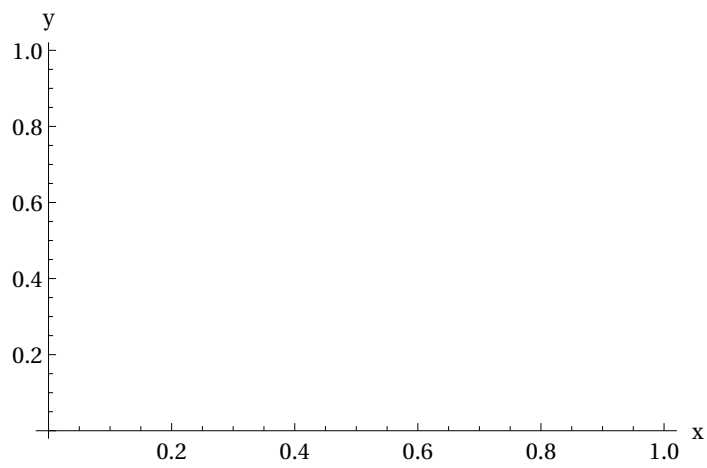
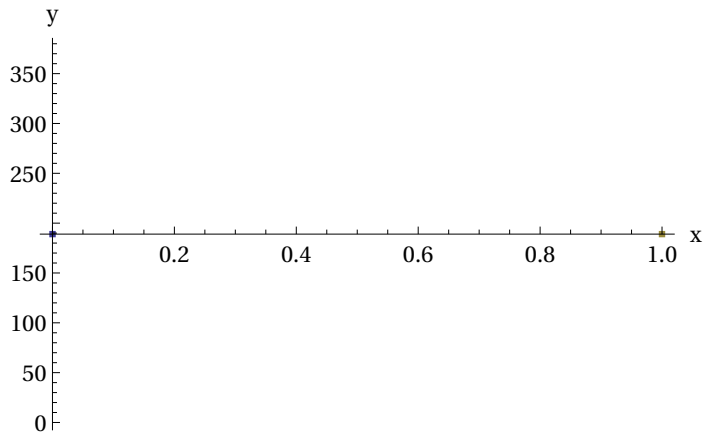
35

$$-0.07 - 2.4506 \times 10^{-12} i$$

$$0.0358928 - 0.00853491 i$$

$$-0.613509 + 0.0535121 i$$

$$-0.0525564 + 0.25586 i$$



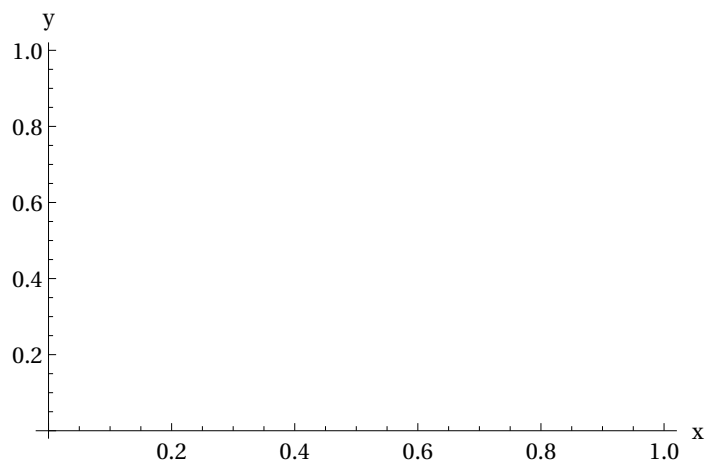
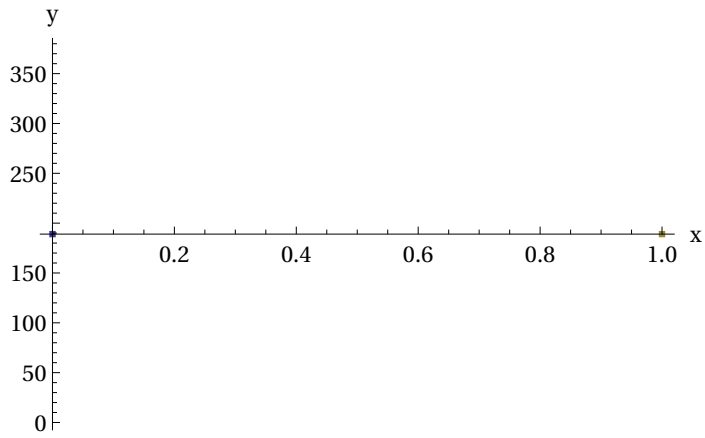
36

$$-0.07 + 2.4506 \times 10^{-12} i$$

$$0.0358928 + 0.00853491 i$$

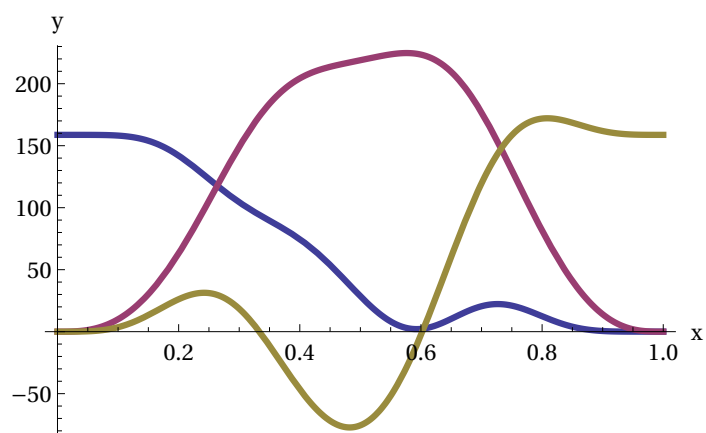
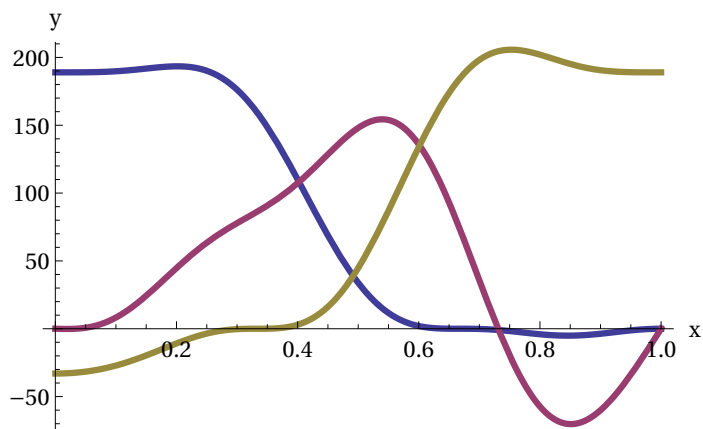
$$-0.613509 - 0.0535121 i$$

$$-0.0525564 - 0.25586 i$$



37

 -0.07 0.0260546 0.350392 0.019444



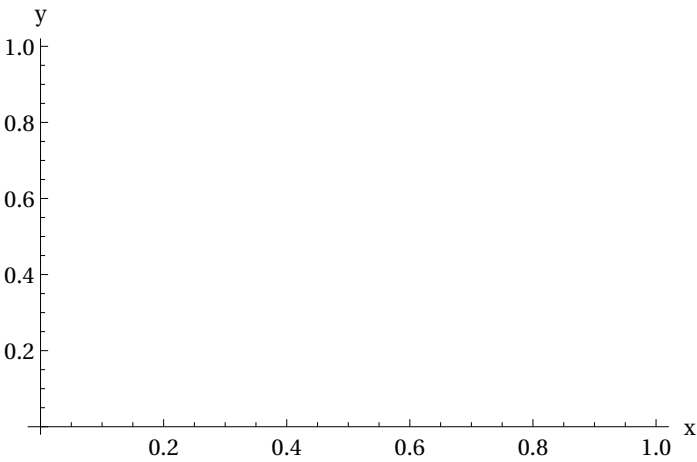
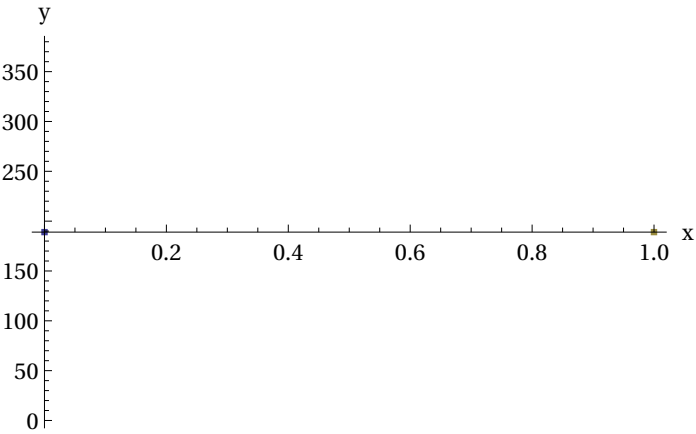
38

$$-0.07 - 3.08071 \times 10^{-13} i$$

$$0.0310963 - 0.00467296 i$$

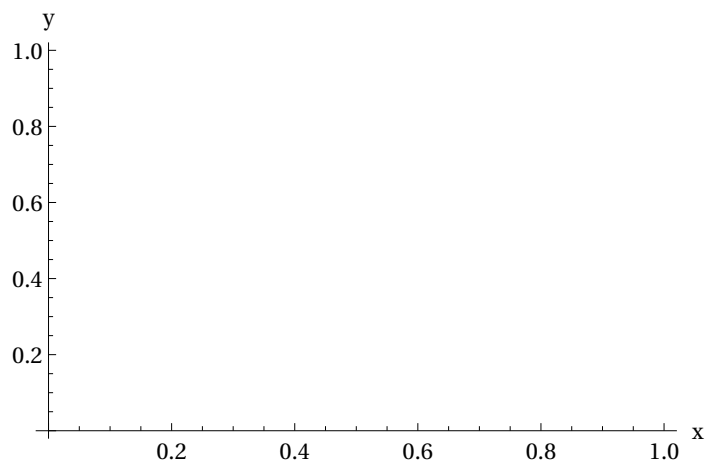
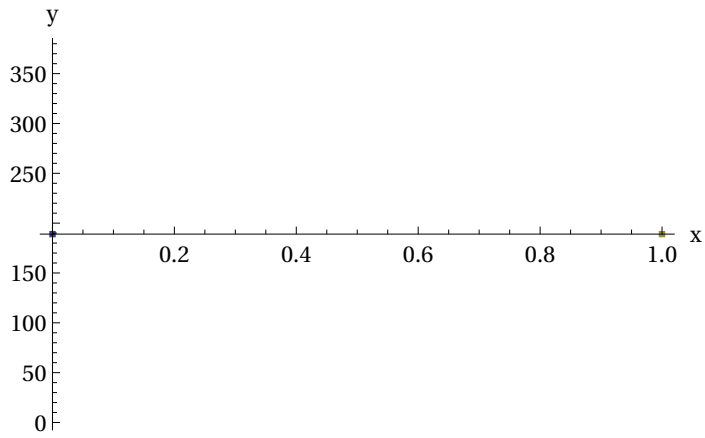
$$-0.0846199 - 0.022407 i$$

$$0.0248855 + 0.0519925 i$$



39

-0.07 + 3.08071 × 10⁻¹³ i
0.0310963 + 0.00467296 i
-0.0846199 + 0.022407 i
0.0248855 - 0.0519925 i



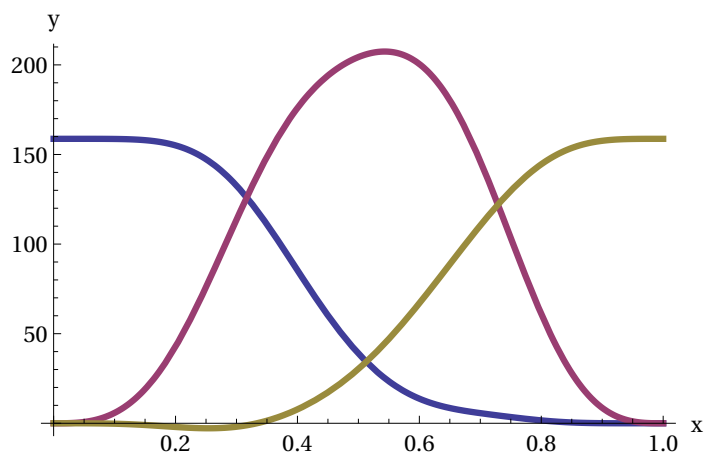
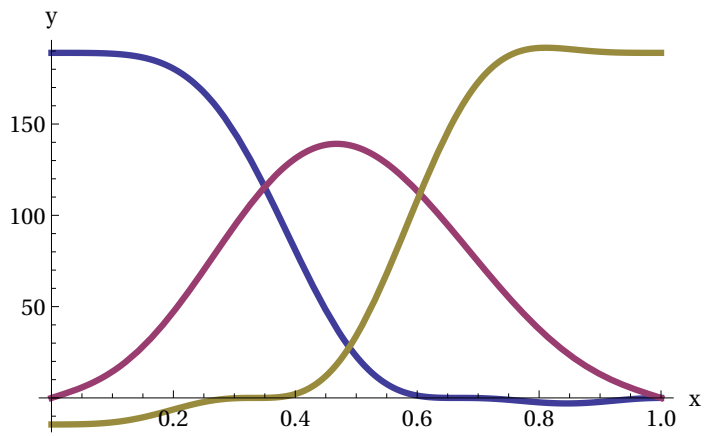
40

-0.07

0.0320075

0.0280597

0.0213629



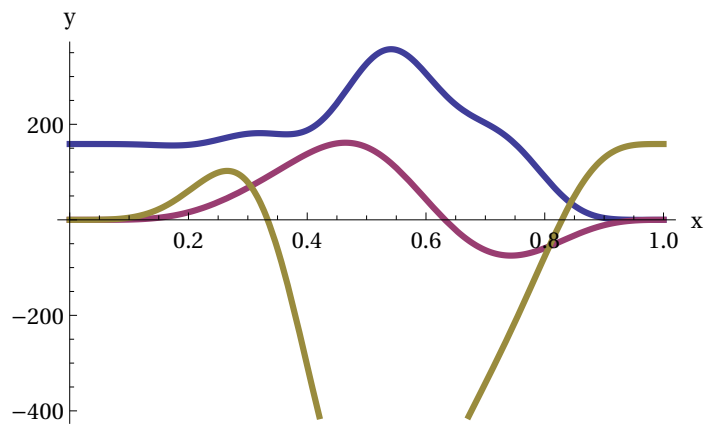
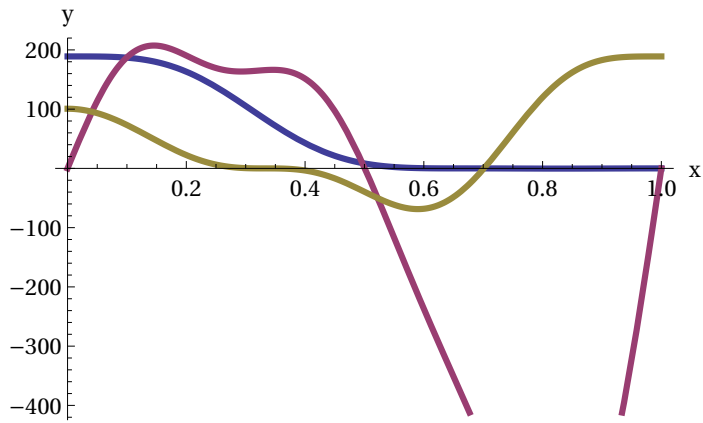
41

0.07

0.0626492

5.0914

1.02853



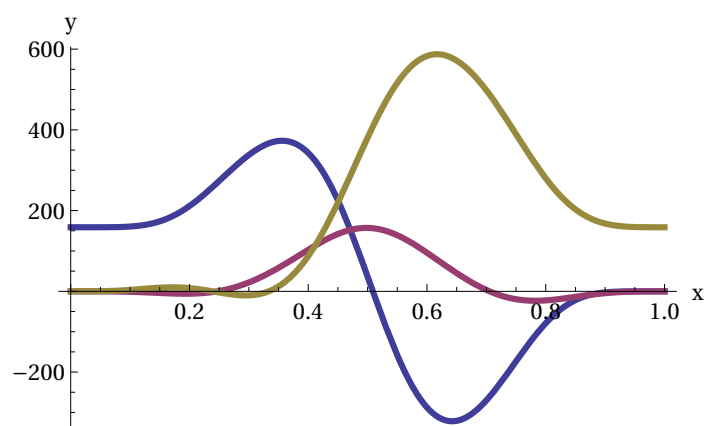
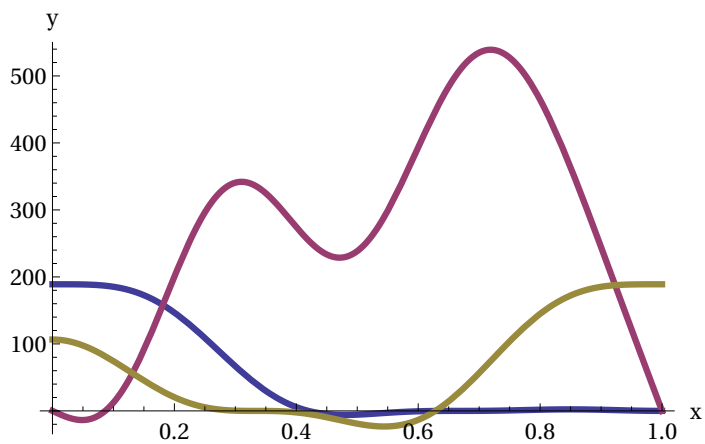
42

0.07

0.139638

0.0965359

0.372667



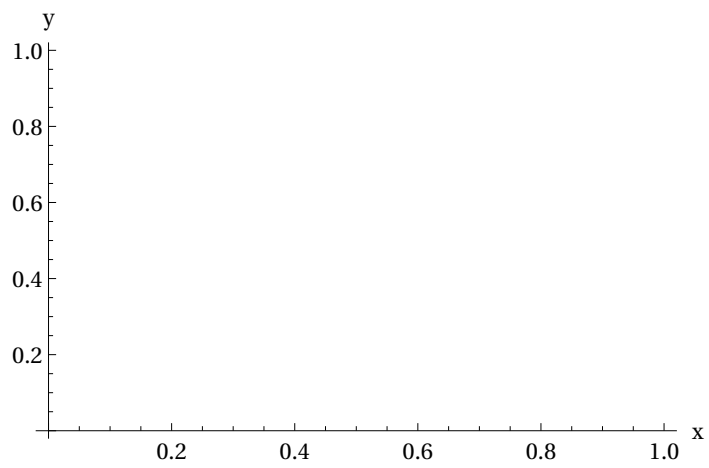
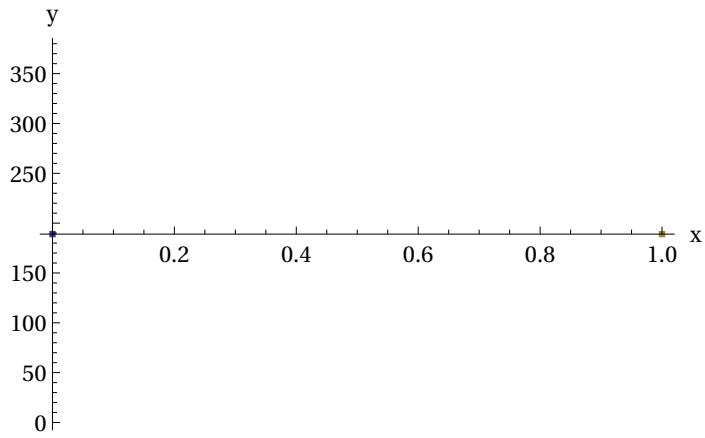
43

$$-0.07 + 5.51473 \times 10^{-13} i$$

$$0.0474181 - 0.0610085 i$$

$$-1.0131 - 5.79127 i$$

$$0.083242 + 0.0171824 i$$



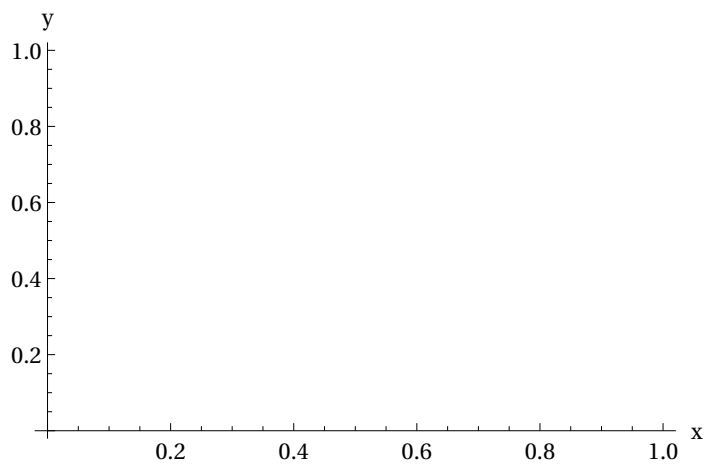
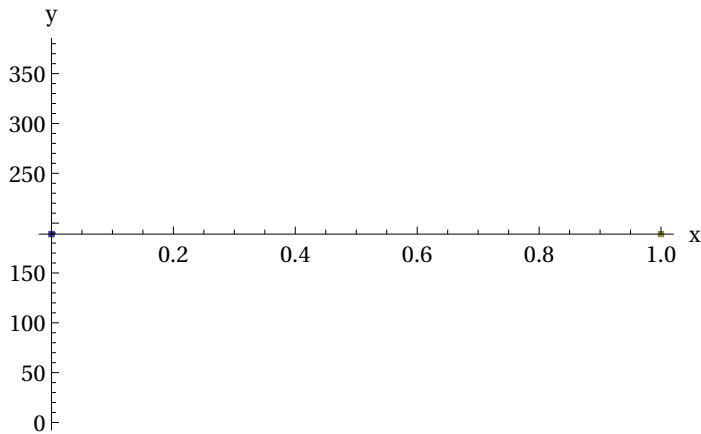
44

$$-0.07 - 5.51473 \times 10^{-13} i$$

$$0.0474181 + 0.0610085 i$$

$$-1.0131 + 5.79127 i$$

$$0.083242 - 0.0171824 i$$



```

kk = 40; (* 0.05 - 20 28 33 *) (* 0.01 - 25 *) (* 0 - 12 13 *)
(* 0.03 - 24 27 28 *) (* 0.07 - 20 26 27 *) (* 0.1 - 20 29 30 31 34 *)
(*fs=OpenWrite["D:\Documents\Wavelets\W3 777 s014.txt",PageWidth→200]
  SetOptions[fs, FormatType→StandardForm,CharacterEncoding→ "ASCII"]*)
KLM2 = Max[K, K1, L, L1, M, M1]
min = 10^-12;

```



```

Array[h2, 2 * KLM2 + 1, -KLM2];
For[i = -KLM2, i ≤ KLM2, i++, h2[i] = 0.0];
For[i = -K, i ≤ K, i++, h2[i] = h[Abs[i]] /. NSLv[[kk]]];
Array[kh2, 2 * KLM2 + 1, -KLM2];
For[i = -KLM2, i ≤ KLM2, i++, kh2[i] = 0.0];
For[i = -K1, i ≤ K1, i++, kh2[i] = kh[Abs[i]] /. NSLv[[kk]]];
shh = Sqrt[Sum[h2[i]^2, {i, -K, K}]];
skh = Sqrt[Sum[kh2[i]^2, {i, -K1, K1}]];

```

```

Array[g2, 2 * KLM2 + 1, -KLM2];
For[i = -KLM2, i ≤ KLM2, i++, g2[i] = 0.0];
For[i = -M, i ≤ M, i++, g2[i] = g[Abs[i]] /. NSLv[[kk]]];

```



```

Array[kg2, 2 * KLM2 + 1, -KLM2];
For[i = -KLM2, i ≤ KLM2, i++, kg2[i] = 0.0];
For[i = -M1, i ≤ M1, i++, kg2[i] = kg[Abs[i]] /. NSLv[[kk]]];
shg = Sqrt[Sum[g2[i]^2, {i, -M, M}]];
skg = Sqrt[Sum[kg2[i]^2, {i, -M1, M1}]];

Array[b2, 2 * KLM2 + 1, -KLM2];
For[i = -KLM2, i ≤ KLM2, i++, b2[i] = 0.0];
For[i = -L, i ≤ L, i++, b2[i] = Sign[i] * b[Abs[i]] /. NSLv[[kk]]];
Array[kb2, 2 * KLM2 + 1, -KLM2];
For[i = -KLM2, i ≤ KLM2, i++, kb2[i] = 0.0];
For[i = -L1, i ≤ L1, i++, kb2[i] = -Sign[i] * kb[Abs[i]] /. NSLv[[kk]]];
shb = Sqrt[Sum[b2[i]^2, {i, -L, L}]];
skb = Sqrt[Sum[kb2[i]^2, {i, -L1, L1}]];

```

(* нормировка по обратным функциям *)

```

(*For[i=-K,i≤K,i++,ss=h2[i]*skh;h2[i]=If[Abs[ss]<min,0.0,ss]];
For[i=-K1,i≤K1,i++,ss=kh2[i]/skh;kh2[i]=If[Abs[ss]<min,0.0,ss]];
For[i=-M,i≤M,i++,ss=g2[i]*skg;g2[i]=If[Abs[ss]<min,0.0,ss]];
For[i=-M1,i≤M1,i++,ss=kg2[i]/skg;kg2[i]=If[Abs[ss]<min,0.0,ss]];
For[i=-L,i≤L,i++,ss= b2[i]*skb;b2[i]=If[Abs[ss]<min,0.0,ss]];
For[i=-L1,i≤L1,i++,ss=kb2[i]/skb;kb2[i]=If[Abs[ss]<min,0.0,ss]];*)

```

(* нормировка по прямым функциям *)

```

For[i = -K, i ≤ K, i++, ss = h2[i] / shh;
  h2[i] = If[Abs[ss] < min, 0.0, ss]];
For[i = -K1, i ≤ K1, i++, ss = kh2[i] * shh;
  kh2[i] = If[Abs[ss] < min, 0.0, ss]];
For[i = -M, i ≤ M, i++, ss = g2[i] / shg;
  g2[i] = If[Abs[ss] < min, 0.0, ss]];
For[i = -M1, i ≤ M1, i++, ss = kg2[i] * shg;
  kg2[i] = If[Abs[ss] < min, 0.0, ss]];
For[i = -L, i ≤ L, i++, ss = b2[i] / shb;
  b2[i] = If[Abs[ss] < min, 0.0, ss]];
For[i = -L1, i ≤ L1, i++, ss = kb2[i] * shb;
  kb2[i] = If[Abs[ss] < min, 0.0, ss]];

```

(*For[i=-KLM2,i≤KLM2,i++,Print[kh2[i]]];*)

```

sep = "\t";
(*For[i=-KLM2,i≤KLM2,i++,WriteString[fs,h2[i],sep,
  kh2[i],sep,b2[i],sep,kb2[i],sep,g2[i],sep,kg2[i],"\n"]];
Close[fs];*)
For[i = -KLM2, i ≤ KLM2, i++,
  Print[h2[i], sep, kh2[i], sep, b2[i], sep, kb2[i], sep, g2[i], sep, kg2[i]]];

```

```

ampl = 1.0 / Sqrt[3];
ph2 = ampl * (h2[0] + 2 * Sum[h2[i] * Cos[Pi * i * x], {i, 1, KLM2}]);
pb2 = ampl * 2 * Sum[b2[i] * Sin[Pi * i * x], {i, 1, KLM2}];
pg2 = ampl * (g2[0] + 2 * Sum[g2[i] * Cos[Pi * i * x], {i, 1, KLM2}]);
pkh2 = ampl * (kh2[0] + 2 * Sum[kh2[i] * Cos[Pi * i * x], {i, 1, KLM2}]);
pkb2 = -ampl * 2 * Sum[kb2[i] * Sin[Pi * i * x], {i, 1, KLM2}];
pkg2 = ampl * (kg2[0] + 2 * Sum[kg2[i] * Cos[Pi * i * x], {i, 1, KLM2}]);
pkhh2 = ph2 * pkh2 / (ampl * 3);
pkbb2 = pb2 * pkb2 / (ampl * 3);
pkgg2 = pg2 * pkg2 / (ampl * 3);

Needs["PlotLegends`"];

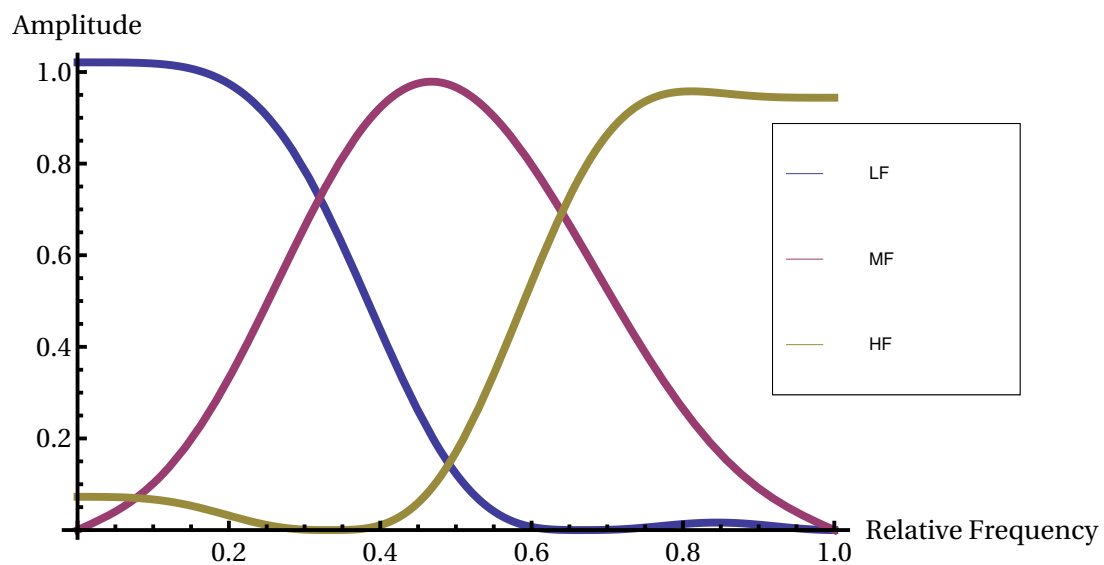
Print[h2[0] * g2[0] + 2 * h2[1] * g2[1]];
Print[kh2[0] * kg2[0] + 2 * kh2[1] * kg2[1]];
plot2 = Plot[{Abs[ph2], Abs[pb2], Abs[pg2]}, {x, 0, 1},
  AxesLabel → {"Relative Frequency", "Amplitude"}, PlotLegend → {"LF", "MF", "HF"},
  LabelStyle → Directive[FontFamily → "Times", FontSize → 14],
  PlotStyle → {Thickness[0.01]}, AxesStyle → Thick, ImageSize → Large,
  LegendPosition → {0.4, -0.3}, LegendSize → 0.5, LegendShadow → None]
Export["d:\plot2.eps", plot2]
plot1 = Plot[{Abs[pkh2], Abs[pkb2], Abs[pkg2]}, {x, 0, 1},
  AxesLabel → {"Relative Frequency", "Amplitude"}, PlotLegend → {"LF", "MF", "HF"},
  LabelStyle → Directive[FontFamily → "Times", FontSize → 14],
  PlotStyle → {Thickness[0.01]}, AxesStyle → Thick, ImageSize → Large,
  LegendPosition → {0.4, -0.3}, LegendSize → 0.5, LegendShadow → None]
Export["d:\plot1.eps", plot1]
Plot[{pkhh2, pkbb2, pkgg2, (pkhh2 + pkbb2 + pkgg2)}, {x, 0, 1}, AxesLabel → {"x", "y"},
  LabelStyle → Directive[FontFamily → "Times", FontSize → 12],
  PlotStyle → {Thickness[0.01]}]

```

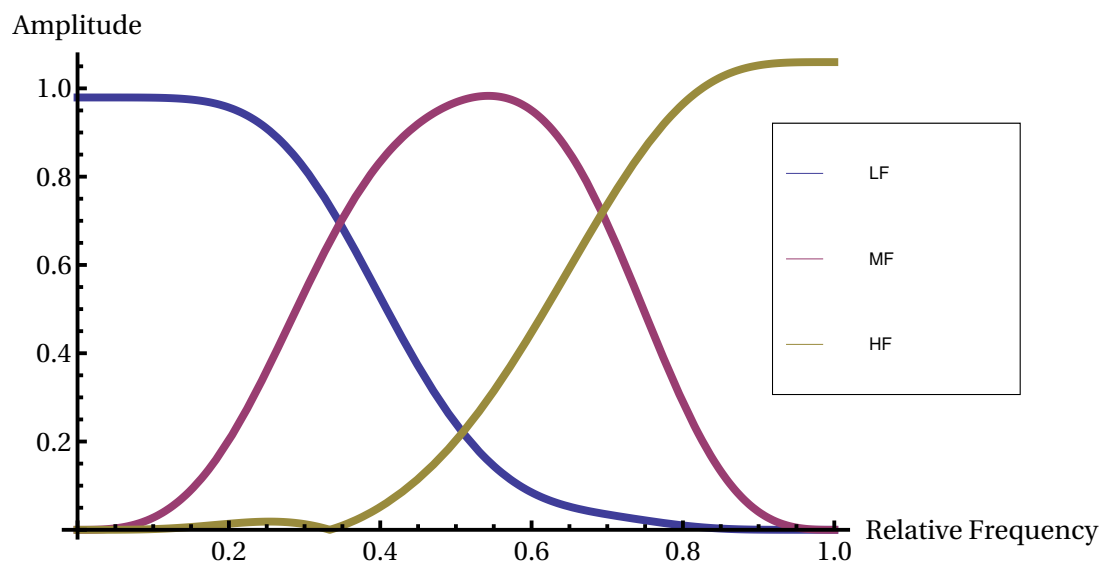
```

0.    0.0000812236    0.    0.0000540336    0.    -0.0000470757
0.    -0.000411828    0.    -0.000273966    0.    0.000238688
0.    0.000107057    0.    0.0000712195    0.    -0.0000620485
0.    0.00091449    0.    -0.000815896    0.    -0.000671062
0.    0.0016123    0.    0.00829397    0.    -0.000219346
0.0123629    0.00762182    -0.00151849    0.00319313    0.0195878    -0.00460337
-0.00810589    -0.00257065    0.00475089    -0.0337432    -0.00853267    0.00924183
-0.0573942    -0.0434293    0.0260899    0.0239495    -0.069081    -0.0249847
-0.0494516    -0.0572617    0.153701    -0.192827    0.0783513    0.0322635
0.155318    0.100785    -0.0473184    -0.052845    0.0954987    0.146139
0.499683    0.482119    -0.688063    0.687905    -0.509985    -0.499947
0.663679    0.717215    0.    0.    0.662462    0.685303
0.499683    0.482119    0.688063    -0.687905    -0.509985    -0.499947
0.155318    0.100785    0.0473184    0.052845    0.0954987    0.146139
-0.0494516    -0.0572617    -0.153701    0.192827    0.0783513    0.0322635
-0.0573942    -0.0434293    -0.0260899    -0.0239495    -0.069081    -0.0249847
-0.00810589    -0.00257065    -0.00475089    0.0337432    -0.00853267    0.00924183
0.0123629    0.00762182    0.00151849    -0.00319313    0.0195878    -0.00460337
0.    0.0016123    0.    -0.00829397    0.    -0.000219346
0.    0.00091449    0.    0.000815896    0.    -0.000671062
0.    0.000107057    0.    -0.0000712195    0.    -0.0000620485
0.    -0.000411828    0.    0.000273966    0.    0.000238688
0.    0.0000812236    0.    -0.0000540336    0.    -0.0000470757
-0.07
0.0094415

```



d:\plot2.eps



d:\plot1.eps

