

\$SPAD/src/input rich3r.input

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Abstract

$(a+bx)^m (c+dx)^n (e+fx)^p$ There are:

- 100 integrals in this file.
- 100 supplied "optimal results".
- 0 matching answers.
- 0 cases where Axiom supplied 2 results.
- 0 cases that Axiom failed to integrate.
- 100 that contain expressions Axiom does not recognize.

Contents

```

      *
)set break resume
)sys rm -f rich3r.output
)spool rich3r.output
)set message test on
)set message auto off
)clear all

--S 1 of 500
t0:=sqrt(1-2*x)/((2+3*x)^(3/2)*(3+5*x)^(3/2))
--R
--R
--R          +-----+
--R          \|- 2x + 1
--R (1) -----
--R          2          +-----+ +-----+
--R          (15x  + 19x + 6)\|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 1

--S 2 of 500
--r0:=-4*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)+
-- 4*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*sqrt(35)+
-- 2*sqrt(1-2*x)/(sqrt(2+3*x)*sqrt(3+5*x))-20*sqrt(1-2*x)*
-- sqrt(2+3*x)/sqrt(3+5*x)
--E 2

--S 3 of 500
--a0:=integrate(t0,x)
--E 3

--S 4 of 500
--m0:=a0-r0
--E 4

--S 5 of 500
--d0:=D(m0,x)
--E 5

)clear all

--S 6 of 500
t0:=sqrt(1-2*x)/((2+3*x)^(5/2)*(3+5*x)^(3/2))
--R
--R
--R          +-----+
--R          \|- 2x + 1
--R (1) -----

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--R          3      2      +-----+ +-----+
--R      (45x  + 87x  + 56x + 12)\|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 6

```

```

--S 7 of 500
--r0:=556/3*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*_
--  sqrt(5/7)-80/3*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
--  sqrt(33)+2/3*sqrt(1-2*x)/((2+3*x)^(3/2)*sqrt(3+5*x))+_
--  92/7*sqrt(1-2*x)/(sqrt(2+3*x)*sqrt(3+5*x))-2780/21*sqrt(1-2*x)*_
--  sqrt(2+3*x)/sqrt(3+5*x)
--E 7

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```

--S 8 of 500
--a0:=integrate(t0,x)
--E 8

```

```

--S 9 of 500
--m0:=a0-r0
--E 9

```

```

--S 10 of 500
--d0:=D(m0,x)
--E 10

```

)clear all

```

--S 11 of 500
t0:=sqrt(1-2*x)/((2+3*x)^(7/2)*(3+5*x)^(3/2))
--R
--R
--R
--R          +-----+
--R          \|- 2x + 1
--R  (1) -----
--R          4      3      2      +-----+ +-----+
--R      (135x  + 351x  + 342x  + 148x + 24)\|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 11

```

```

--S 12 of 500
--r0:=-3352/21*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)+_
--  116464/21*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/_
--  sqrt(35)+2/5*sqrt(1-2*x)/((2+3*x)^(5/2)*sqrt(3+5*x))+_
--  416/105*sqrt(1-2*x)/((2+3*x)^(3/2)*sqrt(3+5*x))+_
--  19268/245*sqrt(1-2*x)/(sqrt(2+3*x)*sqrt(3+5*x))-_
--  116464/147*sqrt(1-2*x)*sqrt(2+3*x)/sqrt(3+5*x)
--E 12

```

```

--S 13 of 500
--a0:=integrate(t0,x)

```

```

--E 13

--S 14 of 500
--m0:=a0-r0
--E 14

--S 15 of 500
--d0:=D(m0,x)
--E 15

)clear all

--S 16 of 500
t0:=(2+3*x)^(9/2)*sqrt(1-2*x)/(3+5*x)^(5/2)
--R
--R
--R
--R      4      3      2      +-----+ +-----+
--R      (81x  + 216x  + 216x  + 96x + 16)\|- 2x + 1 \|3x + 2
--R (1) -----
--R
--R      2      +-----+
--R      (25x  + 30x + 9)\|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 16

--S 17 of 500
--r0:=12601/103125*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
--  sqrt(33)-1473539/206250*elliptic_e(asin(sqrt(5/11)*_
--  sqrt(1-2*x)),33/35)/sqrt(35)-2/15*(2+3*x)^(9/2)*sqrt(1-2*x)/_
--  (3+5*x)^(3/2)-118/165*(2+3*x)^(7/2)*sqrt(1-2*x)/sqrt(3+5*x)+_
--  5153/48125*(2+3*x)^(3/2)*sqrt(1-2*x)*sqrt(3+5*x)+_
--  958/1925*(2+3*x)^(5/2)*sqrt(1-2*x)*sqrt(3+5*x)-_
--  12601/240625*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 17

--S 18 of 500
--a0:=integrate(t0,x)
--E 18

--S 19 of 500
--m0:=a0-r0
--E 19

--S 20 of 500
--d0:=D(m0,x)
--E 20

)clear all

--S 21 of 500
t0:=(2+3*x)^(7/2)*sqrt(1-2*x)/(3+5*x)^(5/2)

```

```

--R
--R
--R      3      2      +-----+ +-----+
--R      (27x  + 54x  + 36x + 8)\|- 2x + 1 \|3x + 2
--R  (1) -----
--R      2      +-----+
--R      (25x  + 30x + 9)\|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 21

```

```

--S 22 of 500
--r0:=-47342/103125*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*_
--  sqrt(7/5)-19033/103125*elliptic_f(asin(sqrt(3/7)*_
--  sqrt(1-2*x)),35/33)/sqrt(33)-2/15*(2+3*x)^(7/2)*sqrt(1-2*x)/_
--  (3+5*x)^(3/2)-458/825*(2+3*x)^(5/2)*sqrt(1-2*x)/sqrt(3+5*x)+_
--  2818/6875*(2+3*x)^(3/2)*sqrt(1-2*x)*sqrt(3+5*x)+_
--  2719/34375*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 22

```

```

--S 23 of 500
--a0:=integrate(t0,x)
--E 23

```

```

--S 24 of 500
--m0:=a0-r0
--E 24

```

```

--S 25 of 500
--d0:=D(m0,x)
--E 25

```

)clear all

```

--S 26 of 500
t0:=(2+3*x)^(5/2)*sqrt(1-2*x)/(3+5*x)^(5/2)
--R
--R
--R      2      +-----+ +-----+
--R      (9x  + 12x + 4)\|- 2x + 1 \|3x + 2
--R  (1) -----
--R      2      +-----+
--R      (25x  + 30x + 9)\|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 26

```

```

--S 27 of 500
--r0:=-169/4125*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*sqrt(7/5)-_
--  3206/4125*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-_
--  2/15*(2+3*x)^(5/2)*sqrt(1-2*x)/(3+5*x)^(3/2)-_
--  326/825*(2+3*x)^(3/2)*sqrt(1-2*x)/sqrt(3+5*x)+_

```

```

--      458/1375*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 27

--S 28 of 500
--a0:=integrate(t0,x)
--E 28

--S 29 of 500
--m0:=a0-r0
--E 29

--S 30 of 500
--d0:=D(m0,x)
--E 30

)clear all

--S 31 of 500
t0:=(2+3*x)^(3/2)*sqrt(1-2*x)/(3+5*x)^(5/2)
--R
--R
--R      +-----+ +-----+
--R      (3x + 2)\|- 2x + 1 \|3x + 2
--R      (1) -----
--R      2          +-----+
--R      (25x  + 30x + 9)\|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 31

--S 32 of 500
--r0:=458/825*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*sqrt(7/5)-
--      1358/825*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
--      sqrt(33)-2/15*(2+3*x)^(3/2)*sqrt(1-2*x)/(3+5*x)^(3/2)-
--      194/825*sqrt(1-2*x)*sqrt(2+3*x)/sqrt(3+5*x)
--E 32

--S 33 of 500
--a0:=integrate(t0,x)
--E 33

--S 34 of 500
--m0:=a0-r0
--E 34

--S 35 of 500
--d0:=D(m0,x)
--E 35

)clear all

```

```

--S 36 of 500
t0:=sqrt(1-2*x)*sqrt(2+3*x)/(3+5*x)^(5/2)
--R
--R
--R          +-----+ +-----+
--R        \|- 2x + 1 \|3x + 2
--R (1)  -----
--R          2          +-----+
--R        (25x  + 30x + 9)\|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 36

```

```

--S 37 of 500
--r0:=62/165*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*sqrt(7/5)+
-- 28/165*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/
-- sqrt(33)-2/15*sqrt(1-2*x)*sqrt(2+3*x)/(3+5*x)^(3/2)-
-- 62/165*sqrt(1-2*x)*sqrt(2+3*x)/sqrt(3+5*x)
--E 37

```

```

--S 38 of 500
--a0:=integrate(t0,x)
--E 38

```

```

--S 39 of 500
--m0:=a0-r0
--E 39

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--S 40 of 500
--d0:=D(m0,x)
--E 40

```

)clear all

```

--S 41 of 500
t0:=sqrt(1-2*x)/((3+5*x)^(5/2)*sqrt(2+3*x))
--R
--R
--R          +-----+
--R        \|- 2x + 1
--R (1)  -----
--R          2          +-----+ +-----+
--R        (25x  + 30x + 9)\|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 41

```

```

--S 42 of 500
--r0:=-136/33*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*
-- sqrt(7/5)+28/33*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/
-- sqrt(33)-2/3*sqrt(1-2*x)*sqrt(2+3*x)/(3+5*x)^(3/2)+
-- 136/33*sqrt(1-2*x)*sqrt(2+3*x)/sqrt(3+5*x)

```


--E 42

--S 43 of 500
--a0:=integrate(t0,x)
--E 43

--S 44 of 500
--m0:=a0-r0
--E 44

--S 45 of 500
--d0:=D(m0,x)
--E 45

)clear all

--S 46 of 500
t0:=sqrt(1-2*x)/((2+3*x)^(3/2)*(3+5*x)^(5/2))
--R
--R
--R
--R
--R (1)
$$\frac{\sqrt{-2x + 1}}{(75x^3 + 140x^2 + 87x + 18)\sqrt{3x + 2}\sqrt{5x + 3}}$$

--R
--R Type: Expression(Integer)
--E 46

--S 47 of 500
--r0:=536/33*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-
-- 532/33*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*sqrt(35)+
-- 2*sqrt(1-2*x)/((3+5*x)^(3/2)*sqrt(2+3*x))-40/3*sqrt(1-2*x)*
-- sqrt(2+3*x)/(3+5*x)^(3/2)+2660/33*sqrt(1-2*x)*sqrt(2+3*x)/sqrt(3+5*x)
--E 47

--S 48 of 500
--a0:=integrate(t0,x)
--E 48

--S 49 of 500
--m0:=a0-r0
--E 49

--S 50 of 500
--d0:=D(m0,x)
--E 50

)clear all

--S 51 of 500

```

t0:=sqrt(1-2*x)/((2+3*x)^(5/2)*(3+5*x)^(5/2))
--R
--R
--R              +-----+
--R             \|- 2x + 1
--R (1) -----
--R           4      3      2      +-----+ +-----+
--R      (225x  + 570x  + 541x  + 228x + 36)\|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 51

--S 52 of 500
--r0:=-36968/33*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*sqrt(5/7)+
-- 5320/33*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)+
-- 2/3*sqrt(1-2*x)/((2+3*x)^(3/2)*(3+5*x)^(3/2))+416/21*_
-- sqrt(1-2*x)/((3+5*x)^(3/2)*sqrt(2+3*x))-2780/21*sqrt(1-2*x)*_
-- sqrt(2+3*x)/(3+5*x)^(3/2)+184840/231*sqrt(1-2*x)*sqrt(2+3*x)/sqrt(3+5*x)
--E 52

--S 53 of 500
--a0:=integrate(t0,x)
--E 53

--S 54 of 500
--m0:=a0-r0
--E 54

--S 55 of 500
--d0:=D(m0,x)
--E 55

)clear all

--S 56 of 500
t0:=sqrt(1-2*x)/((2+3*x)^(7/2)*(3+5*x)^(5/2))
--R
--R
--R              +-----+
--R             \|- 2x + 1
--R (1) -----
--R           5      4      3      2      +-----+ +-----+
--R      (675x  + 2160x  + 2763x  + 1766x  + 564x + 72)\|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 56

--S 57 of 500
--r0:=296816/231*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
-- sqrt(33)-10312712/231*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/_
-- sqrt(35)+2/5*sqrt(1-2*x)/((2+3*x)^(5/2)*(3+5*x)^(3/2))+_
-- 556/105*sqrt(1-2*x)/((2+3*x)^(3/2)*(3+5*x)^(3/2))+_

```

```

--      116044/735*sqrt(1-2*x)/((3+5*x)^(3/2)*sqrt(2+3*x))-
--      155104/147*sqrt(1-2*x)*sqrt(2+3*x)/(3+5*x)^(3/2)+
--      10312712/1617*sqrt(1-2*x)*sqrt(2+3*x)/sqrt(3+5*x)
--E 57

--S 58 of 500
--a0:=integrate(t0,x)
--E 58

--S 59 of 500
--m0:=a0-r0
--E 59

--S 60 of 500
--d0:=D(m0,x)
--E 60

)clear all

--S 61 of 500
t0:=(1-2*x)^(3/2)*(2+3*x)^(5/2)*sqrt(3+5*x)
--R
--R
--R      3      2      +-----+ +-----+ +-----+
--R      (1)  (- 18x  - 15x  + 4x + 4)\|- 2x + 1 \|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 61

--S 62 of 500
--r0:=2/55*(1-2*x)^(3/2)*(2+3*x)^(5/2)*(3+5*x)^(3/2)+17427983/16706250*_
--      elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-
--      604915631/16706250*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/_
--      sqrt(35)+1103/259875*(2+3*x)^(3/2)*(3+5*x)^(3/2)*sqrt(1-2*x)+
--      178/7425*(2+3*x)^(5/2)*(3+5*x)^(3/2)*sqrt(1-2*x)-
--      124891/2165625*(3+5*x)^(3/2)*sqrt(1-2*x)*sqrt(2+3*x)-
--      18177329/38981250*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 62

--S 63 of 500
--a0:=integrate(t0,x)
--E 63

--S 64 of 500
--m0:=a0-r0
--E 64

--S 65 of 500
--d0:=D(m0,x)
--E 65

```

```

)clear all

--S 66 of 500
t0:=(1-2*x)^(3/2)*(2+3*x)^(3/2)*sqrt(3+5*x)
--R
--R
--R          2      +-----+ +-----+ +-----+
--R (1)  (- 6x  - x + 2)\|- 2x + 1 \|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 66

--S 67 of 500
--r0:=2/45*(1-2*x)^(3/2)*(2+3*x)^(3/2)*(3+5*x)^(3/2)+83093/151875*_
-- elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-
-- 5684677/303750*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/_
-- sqrt(35)+62/1575*(2+3*x)^(3/2)*(3+5*x)^(3/2)*sqrt(1-2*x)-
-- 347/39375*(3+5*x)^(3/2)*sqrt(1-2*x)*sqrt(2+3*x)-
-- 84134/354375*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 67

--S 68 of 500
--a0:=integrate(t0,x)
--E 68

--S 69 of 500
--m0:=a0-r0
--E 69

--S 70 of 500
--d0:=D(m0,x)
--E 70

)clear all

--S 71 of 500
t0:=(1-2*x)^(3/2)*sqrt(2+3*x)*sqrt(3+5*x)
--R
--R
--R          +-----+ +-----+ +-----+
--R (1)  (- 2x + 1)\|- 2x + 1 \|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 71

--S 72 of 500
--r0:=4289/10125*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-
-- 118898/10125*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/_
-- sqrt(35)+2/35*(1-2*x)^(3/2)*(3+5*x)^(3/2)*sqrt(2+3*x)+_
-- 194/2625*(3+5*x)^(3/2)*sqrt(1-2*x)*sqrt(2+3*x)-
-- 2657/23625*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 72

```

```

--S 73 of 500
--a0:=integrate(t0,x)
--E 73

--S 74 of 500
--m0:=a0-r0
--E 74

--S 75 of 500
--d0:=D(m0,x)
--E 75

)clear all

--S 76 of 500
t0:=(1-2*x)^(3/2)*sqrt(3+5*x)/sqrt(2+3*x)
--R
--R
--R
--R          +-----+ +-----+
--R      (- 2x + 1)\|- 2x + 1 \|5x + 3
--R  (1)  -----
--R          +-----+
--R          \|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 76

--S 77 of 500
--r0:=-4157/2025*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*_
--      sqrt(7/5)+4382/2025*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
--      sqrt(33)+2/15*(1-2*x)^(3/2)*sqrt(2+3*x)*sqrt(3+5*x)+214/675*_
--      sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 77

--S 78 of 500
--a0:=integrate(t0,x)
--E 78

--S 79 of 500
--m0:=a0-r0
--E 79

--S 80 of 500
--d0:=D(m0,x)
--E 80

)clear all

--S 81 of 500
t0:=(1-2*x)^(3/2)*sqrt(3+5*x)/(2+3*x)^(3/2)

```

```

--R
--R
--R      +-----+ +-----+
--R      (- 2x + 1)\|- 2x + 1 \|5x + 3
--R (1) -----
--R      +-----+
--R      (3x + 2)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 81

--S 82 of 500
--r0:=494/81*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*sqrt(7/5)-
-- 1610/81*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
-- sqrt(33)-2/3*(1-2*x)^(3/2)*sqrt(3+5*x)/sqrt(2+3*x)-16/27*_
-- sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 82

--S 83 of 500
--a0:=integrate(t0,x)
--E 83

--S 84 of 500
--m0:=a0-r0
--E 84

--S 85 of 500
--d0:=D(m0,x)
--E 85

)clear all

--S 86 of 500
t0:=(1-2*x)^(3/2)*sqrt(3+5*x)/(2+3*x)^(5/2)
--R
--R
--R      +-----+ +-----+
--R      (- 2x + 1)\|- 2x + 1 \|5x + 3
--R (1) -----
--R      2          +-----+
--R      (9x  + 12x + 4)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 86

--S 87 of 500
--r0:=724/81*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-
-- 98/81*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*sqrt(35)-
-- 2/9*(1-2*x)^(3/2)*sqrt(3+5*x)/(2+3*x)^(3/2)+82/27*_
-- sqrt(1-2*x)*sqrt(3+5*x)/sqrt(2+3*x)
--E 87

```

```

--S 88 of 500
--a0:=integrate(t0,x)
--E 88

--S 89 of 500
--m0:=a0-r0
--E 89

--S 90 of 500
--d0:=D(m0,x)
--E 90

)clear all

--S 91 of 500
t0:=(1-2*x)^(3/2)*sqrt(3+5*x)/(2+3*x)^(7/2)
--R
--R
--R          +-----+ +-----+
--R      (- 2x + 1)\|- 2x + 1 \|5x + 3
--R  (1)  -----
--R          3      2      +-----+
--R      (27x  + 54x  + 36x + 8)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 91

--S 92 of 500
--r0:=68/81*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-
-- 3896/81*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/_
-- sqrt(35)-2/15*(1-2*x)^(3/2)*sqrt(3+5*x)/(2+3*x)^(5/2)+_
-- 82/135*sqrt(1-2*x)*sqrt(3+5*x)/(2+3*x)^(3/2)+3896/945*_
-- sqrt(1-2*x)*sqrt(3+5*x)/sqrt(2+3*x)
--E 92

--S 93 of 500
--a0:=integrate(t0,x)
--E 93

--S 94 of 500
--m0:=a0-r0
--E 94

--S 95 of 500
--d0:=D(m0,x)
--E 95

)clear all

--S 96 of 500
t0:=(1-2*x)^(3/2)*sqrt(3+5*x)/(2+3*x)^(9/2)

```

```

--R
--R
--R          +-----+ +-----+
--R      (- 2x + 1)\|- 2x + 1 \|5x + 3
--R (1) -----
--R          4      3      2      +-----+
--R      (81x  + 216x  + 216x  + 96x + 16)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 96

```

```

--S 97 of 500
--r0:=17032/3969*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
--  sqrt(33)-595324/3969*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/_
--  sqrt(35)-2/21*(1-2*x)^(3/2)*sqrt(3+5*x)/(2+3*x)^(7/2)+_
--  82/315*sqrt(1-2*x)*sqrt(3+5*x)/(2+3*x)^(5/2)+8516/6615*_
--  sqrt(1-2*x)*sqrt(3+5*x)/(2+3*x)^(3/2)+595324/46305*sqrt(1-2*x)*_
--  sqrt(3+5*x)/sqrt(2+3*x)
--E 97

```

```

--S 98 of 500
--a0:=integrate(t0,x)
--E 98

```

```

--S 99 of 500
--m0:=a0-r0
--E 99

```

```

--S 100 of 500
--d0:=D(m0,x)
--E 100

```

)clear all

```

--S 101 of 500
t0:=(1-2*x)^(3/2)*sqrt(3+5*x)/(2+3*x)^(11/2)
--R
--R
--R          +-----+ +-----+
--R      (- 2x + 1)\|- 2x + 1 \|5x + 3
--R (1) -----
--R          5      4      3      2      +-----+
--R      (243x  + 810x  + 1080x  + 720x  + 240x + 32)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 101

```

```

--S 102 of 500
--r0:=1226552/83349*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
--  sqrt(33)-42623864/83349*elliptic_e(asin(sqrt(5/11)*_
--  sqrt(1-2*x)),33/35)/sqrt(35)-2/27*(1-2*x)^(3/2)*_
--  sqrt(3+5*x)/(2+3*x)^(9/2)+82/567*sqrt(1-2*x)*sqrt(3+5*x)/_

```



```

--      (2+3*x)^(7/2)+13136/19845*sqrt(1-2*x)*sqrt(3+5*x)/_
--      (2+3*x)^(5/2)+613276/138915*sqrt(1-2*x)*sqrt(3+5*x)/_
--      (2+3*x)^(3/2)+42623864/972405*sqrt(1-2*x)*sqrt(3+5*x)/sqrt(2+3*x)
--E 102

--S 103 of 500
--a0:=integrate(t0,x)
--E 103

--S 104 of 500
--m0:=a0-r0
--E 104

--S 105 of 500
--d0:=D(m0,x)
--E 105

)clear all

--S 106 of 500
t0:=(1-2*x)^(3/2)*(2+3*x)^(5/2)*(3+5*x)^(3/2)
--R
--R
--R      4      3      2      +-----+ +-----+ +-----+
--R      (1)  (- 90x  - 129x  - 25x  + 32x + 12)\|- 2x + 1 \|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 106

--S 107 of 500
--r0:=2/65*(1-2*x)^(3/2)*(2+3*x)^(5/2)*(3+5*x)^(5/2)+_
--      371279941/108590625*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
--      sqrt(33)-51601293223/434362500*elliptic_e(asin(sqrt(5/11)*_
--      sqrt(1-2*x)),33/35)/sqrt(35)+601/160875*(2+3*x)^(3/2)*_
--      (3+5*x)^(5/2)*sqrt(1-2*x)+178/10725*(2+3*x)^(5/2)*(3+5*x)^(5/2)*_
--      sqrt(1-2*x)-11725073/56306250*(3+5*x)^(3/2)*sqrt(1-2*x)*_
--      sqrt(2+3*x)-18034/625625*(3+5*x)^(5/2)*sqrt(1-2*x)*sqrt(2+3*x)-_
--      776112041/506756250*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 107

--S 108 of 500
--a0:=integrate(t0,x)
--E 108

--S 109 of 500
--m0:=a0-r0
--E 109

--S 110 of 500
--d0:=D(m0,x)
--E 110

```

```

)clear all

--S 111 of 500
t0:=(1-2*x)^(3/2)*(2+3*x)^(3/2)*(3+5*x)^(3/2)
--R
--R
--R          3      2      +-----+ +-----+ +-----+
--R (1) (- 30x  - 23x  + 7x + 6)\|- 2x + 1 \|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 111

--S 112 of 500
--r0:=2/55*(1-2*x)^(3/2)*(2+3*x)^(3/2)*(3+5*x)^(5/2)+5199979/3341250*_
--  elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-
--  90397364/1670625*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/_
--  sqrt(35)+62/2475*(2+3*x)^(3/2)*(3+5*x)^(5/2)*sqrt(1-2*x)-
--  40703/433125*(3+5*x)^(3/2)*sqrt(1-2*x)*sqrt(2+3*x)-
--  23/9625*(3+5*x)^(5/2)*sqrt(1-2*x)*sqrt(2+3*x)-
--  5442127/7796250*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 112

--S 113 of 500
--a0:=integrate(t0,x)
--E 113

--S 114 of 500
--m0:=a0-r0
--E 114

--S 115 of 500
--d0:=D(m0,x)
--E 115

)clear all

--S 116 of 500
t0:=(1-2*x)^(3/2)*(3+5*x)^(3/2)*sqrt(2+3*x)
--R
--R
--R          2      +-----+ +-----+ +-----+
--R (1) (- 10x  - x + 3)\|- 2x + 1 \|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 116

--S 117 of 500
--r0:=70226/91125*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-
--  4971289/182250*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/_
--  sqrt(35)+2/45*(1-2*x)^(3/2)*(3+5*x)^(5/2)*sqrt(2+3*x)-
--  839/23625*(3+5*x)^(3/2)*sqrt(1-2*x)*sqrt(2+3*x)+

```

```

--      194/4725*(3+5*x)^(5/2)*sqrt(1-2*x)*sqrt(2+3*x)-
--      76163/212625*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 117

--S 118 of 500
--a0:=integrate(t0,x)
--E 118

--S 119 of 500
--m0:=a0-r0
--E 119

--S 120 of 500
--d0:=D(m0,x)
--E 120

)clear all

--S 121 of 500
t0:=(1-2*x)^(3/2)*(3+5*x)^(3/2)/sqrt(2+3*x)
--R
--R
--R      2      +-----+ +-----+
--R      (- 10x  - x + 3)\|- 2x + 1 \|5x + 3
--R      (1) -----
--R              +-----+
--R              \|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 121

--S 122 of 500
--r0:=-31/2025*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-
--      29933/2025*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/_
--      sqrt(35)+2/21*(1-2*x)^(3/2)*(3+5*x)^(3/2)*sqrt(2+3*x)+_
--      74/525*(3+5*x)^(3/2)*sqrt(1-2*x)*sqrt(2+3*x)-1847/4725*_
--      sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 122

--S 123 of 500
--a0:=integrate(t0,x)
--E 123

--S 124 of 500
--m0:=a0-r0
--E 124

--S 125 of 500
--d0:=D(m0,x)
--E 125

```

```

)clear all

--S 126 of 500
t0:=(1-2*x)^(3/2)*(3+5*x)^(3/2)/(2+3*x)^(3/2)
--R
--R
--R          2          +-----+ +-----+
--R      (- 10x  - x + 3)\|- 2x + 1 \|5x + 3
--R (1)  -----
--R                                +-----+
--R                          (3x + 2)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 126

--S 127 of 500
--r0:=-2209/405*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*_
--  sqrt(7/5)+4144/405*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
--  sqrt(33)-2/3*(1-2*x)^(3/2)*(3+5*x)^(3/2)/sqrt(2+3*x)-_
--  8/15*(3+5*x)^(3/2)*sqrt(1-2*x)*sqrt(2+3*x)+494/135*_
--  sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 127

--S 128 of 500
--a0:=integrate(t0,x)
--E 128

--S 129 of 500
--m0:=a0-r0
--E 129

--S 130 of 500
--d0:=D(m0,x)
--E 130

)clear all

--S 131 of 500
t0:=(1-2*x)^(3/2)*(3+5*x)^(3/2)/(2+3*x)^(5/2)
--R
--R
--R          2          +-----+ +-----+
--R      (- 10x  - x + 3)\|- 2x + 1 \|5x + 3
--R (1)  -----
--R                                +-----+
--R                          (9x  + 12x + 4)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 131

--S 132 of 500
--r0:=-2/9*(1-2*x)^(3/2)*(3+5*x)^(3/2)/(2+3*x)^(3/2)-_

```

```

--      8774/243*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)+_
--      592/243*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*_
--      sqrt(35)+74/9*(3+5*x)^(3/2)*sqrt(1-2*x)/sqrt(2+3*x)-_
--      1150/81*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 132

--S 133 of 500
--a0:=integrate(t0,x)
--E 133

--S 134 of 500
--m0:=a0-r0
--E 134

--S 135 of 500
--d0:=D(m0,x)
--E 135

)clear all

--S 136 of 500
t0:=(1-2*x)^(3/2)*(3+5*x)^(3/2)/(2+3*x)^(7/2)
--R
--R
--R      2      +-----+ +-----+
--R      (- 10x  - x + 3)\|- 2x + 1 \|5x + 3
--R      (1) -----
--R      3      2      +-----+
--R      (27x  + 54x  + 36x + 8)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 136

--S 137 of 500
--r0:=-2/15*(1-2*x)^(3/2)*(3+5*x)^(3/2)/(2+3*x)^(5/2)+_
--      1184/81*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-_
--      4418/81*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/_
--      sqrt(35)+74/45*(3+5*x)^(3/2)*sqrt(1-2*x)/(2+3*x)^(3/2)+_
--      988/945*sqrt(1-2*x)*sqrt(3+5*x)/sqrt(2+3*x)
--E 137

--S 138 of 500
--a0:=integrate(t0,x)
--E 138

--S 139 of 500
--m0:=a0-r0
--E 139

--S 140 of 500
--d0:=D(m0,x)

```

```

--E 140

)clear all

--S 141 of 500
t0:=(1-2*x)^(3/2)*(3+5*x)^(3/2)/(2+3*x)^(9/2)
--R
--R
--R
--R      2      +-----+ +-----+
--R      (- 10x  - x + 3)\|- 2x + 1 \|5x + 3
--R (1) -----
--R      4      3      2      +-----+
--R      (81x  + 216x  + 216x  + 96x + 16)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 141

--S 142 of 500
--r0:=-2/21*(1-2*x)^(3/2)*(3+5*x)^(3/2)/(2+3*x)^(7/2)-
-- 124/3969*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-
-- 119732/3969*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/
-- sqrt(35)+74/105*(3+5*x)^(3/2)*sqrt(1-2*x)/(2+3*x)^(5/2)-
-- 3632/6615*sqrt(1-2*x)*sqrt(3+5*x)/(2+3*x)^(3/2)+
-- 119732/46305*sqrt(1-2*x)*sqrt(3+5*x)/sqrt(2+3*x)
--E 142

--S 143 of 500
--a0:=integrate(t0,x)
--E 143

--S 144 of 500
--m0:=a0-r0
--E 144

--S 145 of 500
--d0:=D(m0,x)
--E 145

)clear all

--S 146 of 500
t0:=(1-2*x)^(3/2)*(3+5*x)^(3/2)/(2+3*x)^(11/2)
--R
--R
--R
--R      2      +-----+ +-----+
--R      (- 10x  - x + 3)\|- 2x + 1 \|5x + 3
--R (1) -----
--R      5      4      3      2      +-----+
--R      (243x  + 810x  + 1080x  + 720x  + 240x + 32)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 146

```

```

--S 147 of 500
--r0:=-2/27*(1-2*x)^(3/2)*(3+5*x)^(3/2)/(2+3*x)^(9/2)+_
-- 561808/250047*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
-- sqrt(33)-19885156/250047*elliptic_e(asin(sqrt(5/11)*_
-- sqrt(1-2*x)),33/35)/sqrt(35)+74/189*(3+5*x)^(3/2)*_
-- sqrt(1-2*x)/(2+3*x)^(7/2)-8252/19845*sqrt(1-2*x)*sqrt(3+5*x)/_
-- (2+3*x)^(5/2)+280904/416745*sqrt(1-2*x)*sqrt(3+5*x)/_
-- (2+3*x)^(3/2)+19885156/2917215*sqrt(1-2*x)*sqrt(3+5*x)/sqrt(2+3*x)
--E 147

--S 148 of 500
--a0:=integrate(t0,x)
--E 148

--S 149 of 500
--m0:=a0-r0
--E 149

--S 150 of 500
--d0:=D(m0,x)
--E 150

)clear all

--S 151 of 500
t0:=(1-2*x)^(3/2)*(3+5*x)^(3/2)/(2+3*x)^(13/2)
--R
--R
--R
--R          2          +-----+ +-----+
--R      (- 10x  - x + 3)\|- 2x + 1 \|5x + 3
--R (1) -----
--R          6          5          4          3          2          +-----+
--R      (729x  + 2916x  + 4860x  + 4320x  + 2160x  + 576x + 64)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 151

--S 152 of 500
--r0:=-2/33*(1-2*x)^(3/2)*(3+5*x)^(3/2)/(2+3*x)^(11/2)+_
-- 41599832/6417873*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
-- sqrt(33)-1446357824/6417873*elliptic_e(asin(sqrt(5/11)*_
-- sqrt(1-2*x)),33/35)/sqrt(35)+74/297*(3+5*x)^(3/2)*sqrt(1-2*x)/_
-- (2+3*x)^(9/2)-12872/43659*sqrt(1-2*x)*sqrt(3+5*x)/(2+3*x)^(7/2)+_
-- 442076/1528065*sqrt(1-2*x)*sqrt(3+5*x)/(2+3*x)^(5/2)+_
-- 20799916/10696455*sqrt(1-2*x)*sqrt(3+5*x)/(2+3*x)^(3/2)+_
-- 1446357824/74875185*sqrt(1-2*x)*sqrt(3+5*x)/sqrt(2+3*x)
--E 152

--S 153 of 500
--a0:=integrate(t0,x)

```

```

--E 153

--S 154 of 500
--m0:=a0-r0
--E 154

--S 155 of 500
--d0:=D(m0,x)
--E 155

)clear all

--S 156 of 500
t0:=(1-2*x)^(3/2)*(2+3*x)^(5/2)*(3+5*x)^(5/2)
--R
--R
--R (1)
--R      5      4      3      2      +-----+ +-----+ +-----+
--R (- 450x  - 915x  - 512x  + 85x  + 156x + 36)\|- 2x + 1 \|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 156

--S 157 of 500
--r0:=2/75*(1-2*x)^(3/2)*(2+3*x)^(5/2)*(3+5*x)^(7/2)+
-- 48128081531/3909262500*elliptic_f(asin(sqrt(3/7)*
-- sqrt(1-2*x)),35/33)/sqrt(33)-836091184171/1954631250*
-- elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/sqrt(35)+
-- 2503/804375*(2+3*x)^(3/2)*(3+5*x)^(7/2)*sqrt(1-2*x)+
-- 178/14625*(2+3*x)^(5/2)*(3+5*x)^(7/2)*sqrt(1-2*x)-
-- 380132617/506756250*(3+5*x)^(3/2)*sqrt(1-2*x)*sqrt(2+3*x)-
-- 57509209/506756250*(3+5*x)^(5/2)*sqrt(1-2*x)*sqrt(2+3*x)-
-- 199721/12065625*(3+5*x)^(7/2)*sqrt(1-2*x)*sqrt(2+3*x)-
-- 50299451003/9121612500*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 157

--S 158 of 500
--a0:=integrate(t0,x)
--E 158

--S 159 of 500
--m0:=a0-r0
--E 159

--S 160 of 500
--d0:=D(m0,x)
--E 160

)clear all

--S 161 of 500

```



```

t0:=(1-2*x)^(3/2)*(2+3*x)^(3/2)*(3+5*x)^(5/2)
--R
--R
--R          4      3      2      +-----+ +-----+ +-----+
--R (1) (- 150x  - 205x  - 34x  + 51x + 18)\|- 2x + 1 \|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 161

```

```

--S 162 of 500
--r0:=2/65*(1-2*x)^(3/2)*(2+3*x)^(3/2)*(3+5*x)^(7/2)+
-- 134992031/26061750*elliptic_f(asin(sqrt(3/7)*_
-- sqrt(1-2*x)),35/33)/sqrt(33)-9380126059/52123500*_
-- elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/sqrt(35)+
-- 62/3575*(2+3*x)^(3/2)*(3+5*x)^(7/2)*sqrt(1-2*x)-
-- 2133359/6756750*(3+5*x)^(3/2)*sqrt(1-2*x)*sqrt(2+3*x)-
-- 160084/3378375*(3+5*x)^(5/2)*sqrt(1-2*x)*sqrt(2+3*x)-
-- 67/160875*(3+5*x)^(7/2)*sqrt(1-2*x)*sqrt(2+3*x)-
-- 70536439/30405375*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 162

```

```

--S 163 of 500
--a0:=integrate(t0,x)
--E 163

```

```

--S 164 of 500
--m0:=a0-r0
--E 164

```

```

--S 165 of 500
--d0:=D(m0,x)
--E 165

```

)clear all

```

--S 166 of 500
t0:=(1-2*x)^(3/2)*(3+5*x)^(5/2)*sqrt(2+3*x)
--R
--R
--R          3      2      +-----+ +-----+ +-----+
--R (1) (- 50x  - 35x  + 12x + 9)\|- 2x + 1 \|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 166

```

```

--S 167 of 500
--r0:=2810993/1202850*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
-- sqrt(33)-97540001/1202850*elliptic_e(asin(sqrt(5/11)*_
-- sqrt(1-2*x)),33/35)/sqrt(35)+2/55*(1-2*x)^(3/2)*(3+5*x)^(7/2)*_
-- sqrt(2+3*x)-22576/155925*(3+5*x)^(3/2)*sqrt(1-2*x)*sqrt(2+3*x)-
-- 2377/155925*(3+5*x)^(5/2)*sqrt(1-2*x)*sqrt(2+3*x)+
-- 194/7425*(3+5*x)^(7/2)*sqrt(1-2*x)*sqrt(2+3*x)-

```

```

--      2930159/2806650*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 167

--S 168 of 500
--a0:=integrate(t0,x)
--E 168

--S 169 of 500
--m0:=a0-r0
--E 169

--S 170 of 500
--d0:=D(m0,x)
--E 170

)clear all

--S 171 of 500
t0:=(1-2*x)^(3/2)*(3+5*x)^(5/2)/sqrt(2+3*x)
--R
--R
--R
--R      3      2      +-----+ +-----+
--R      (- 50x  - 35x  + 12x + 9)\|- 2x + 1 \|5x + 3
--R      (1) -----
--R                                 +-----+
--R                                 \|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 171

--S 172 of 500
--r0:=14101/10935*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-
--      886499/21870*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/
--      sqrt(35)+2/27*(1-2*x)^(3/2)*(3+5*x)^(5/2)*sqrt(2+3*x)-
--      499/2835*(3+5*x)^(3/2)*sqrt(1-2*x)*sqrt(2+3*x)+
--      46/567*(3+5*x)^(5/2)*sqrt(1-2*x)*sqrt(2+3*x)-
--      11908/25515*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 172

--S 173 of 500
--a0:=integrate(t0,x)
--E 173

--S 174 of 500
--m0:=a0-r0
--E 174

--S 175 of 500
--d0:=D(m0,x)
--E 175

```

```

)clear all

--S 176 of 500
t0:=(1-2*x)^(3/2)*(3+5*x)^(5/2)/(2+3*x)^(3/2)
--R
--R
--R          3      2      +-----+ +-----+
--R      (- 50x  - 35x  + 12x + 9)\|- 2x + 1 \|5x + 3
--R (1)  -----
--R                                 +-----+
--R                             (3x + 2)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 176

--S 177 of 500
--r0:=-835/243*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-
-- 2894/243*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/_
-- sqrt(35)-2/3*(1-2*x)^(3/2)*(3+5*x)^(5/2)/sqrt(2+3*x)+_
-- 202/63*(3+5*x)^(3/2)*sqrt(1-2*x)*sqrt(2+3*x)-_
-- 32/63*(3+5*x)^(5/2)*sqrt(1-2*x)*sqrt(2+3*x)-_
-- 1061/567*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 177

--S 178 of 500
--a0:=integrate(t0,x)
--E 178

--S 179 of 500
--m0:=a0-r0
--E 179

--S 180 of 500
--d0:=D(m0,x)
--E 180

)clear all

--S 181 of 500
t0:=(1-2*x)^(3/2)*(3+5*x)^(5/2)/(2+3*x)^(5/2)
--R
--R
--R          3      2      +-----+ +-----+
--R      (- 50x  - 35x  + 12x + 9)\|- 2x + 1 \|5x + 3
--R (1)  -----
--R                                 2      +-----+
--R                             (9x  + 12x + 4)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 181

--S 182 of 500

```

```

--r0:=-2/9*(1-2*x)^(3/2)*(3+5*x)^(5/2)/(2+3*x)^(3/2)-
-- 9587/729*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*
-- sqrt(7/5)+21206/729*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/
-- sqrt(33)+362/27*(3+5*x)^(5/2)*sqrt(1-2*x)/sqrt(2+3*x)-
-- 614/27*(3+5*x)^(3/2)*sqrt(1-2*x)*sqrt(2+3*x)+2632/243*_
-- sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 182

--S 183 of 500
--a0:=integrate(t0,x)
--E 183

--S 184 of 500
--m0:=a0-r0
--E 184

--S 185 of 500
--d0:=D(m0,x)
--E 185

)clear all

--S 186 of 500
t0:=(1-2*x)^(3/2)*(3+5*x)^(5/2)/(2+3*x)^(7/2)
--R
--R
--R
--R          3      2      +-----+ +-----+
--R      (- 50x  - 35x  + 12x + 9)\|- 2x + 1 \|5x + 3
--R  (1)  -----
--R          3      2      +-----+
--R      (27x  + 54x  + 36x + 8)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 186

--S 187 of 500
--r0:=-2/15*(1-2*x)^(3/2)*(3+5*x)^(5/2)/(2+3*x)^(5/2)-
-- 47422/729*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/
-- sqrt(33)+116854/729*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/
-- sqrt(35)+362/135*(3+5*x)^(5/2)*sqrt(1-2*x)/(2+3*x)^(3/2)+
-- 9808/945*(3+5*x)^(3/2)*sqrt(1-2*x)/sqrt(2+3*x)-
-- 43214/1701*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 187

--S 188 of 500
--a0:=integrate(t0,x)
--E 188

--S 189 of 500
--m0:=a0-r0
--E 189

```

```
--S 190 of 500
--d0:=D(m0,x)
--E 190
```

```
)clear all
```

```
--S 191 of 500
t0:=(1-2*x)^(3/2)*(3+5*x)^(5/2)/(2+3*x)^(9/2)
```

```
--R
--R
--R          3      2      +-----+ +-----+
--R      (- 50x  - 35x  + 12x + 9)\|- 2x + 1 \|5x + 3
--R (1) -----
--R          4      3      2      +-----+
--R      (81x  + 216x  + 216x  + 96x + 16)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 191
```

```
--S 192 of 500
--r0:=-2/21*(1-2*x)^(3/2)*(3+5*x)^(5/2)/(2+3*x)^(7/2)+
-- 290204/11907*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/
-- sqrt(33)-962678/11907*elliptic_e(asin(sqrt(5/11)*
-- sqrt(1-2*x)),33/35)/sqrt(35)+2108/6615*(3+5*x)^(3/2)*
-- sqrt(1-2*x)/(2+3*x)^(3/2)+362/315*(3+5*x)^(5/2)*
-- sqrt(1-2*x)/(2+3*x)^(5/2)+249448/138915*sqrt(1-2*x)*
-- sqrt(3+5*x)/sqrt(2+3*x)
--E 192
```

```
--S 193 of 500
--a0:=integrate(t0,x)
--E 193
```

```
--S 194 of 500
--m0:=a0-r0
--E 194
```

```
--S 195 of 500
--d0:=D(m0,x)
--E 195
```

```
)clear all
```

```
--S 196 of 500
t0:=(1-2*x)^(3/2)*(3+5*x)^(5/2)/(2+3*x)^(11/2)
```

```
--R
--R
--R          3      2      +-----+ +-----+
--R      (- 50x  - 35x  + 12x + 9)\|- 2x + 1 \|5x + 3
--R (1) -----
```

```

--R          5      4      3      2      +-----+
--R      (243x  + 810x  + 1080x  + 720x  + 240x + 32)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 196

```

```

--S 197 of 500
--r0:=-2/27*(1-2*x)^(3/2)*(3+5*x)^(5/2)/(2+3*x)^(9/2)-
-- 600868/750141*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
-- sqrt(33)-17830424/750141*elliptic_e(asin(sqrt(5/11)*_
-- sqrt(1-2*x)),33/35)/sqrt(35)-1864/6615*(3+5*x)^(3/2)*_
-- sqrt(1-2*x)/(2+3*x)^(5/2)+362/567*(3+5*x)^(5/2)*_
-- sqrt(1-2*x)/(2+3*x)^(7/2)-558524/1250235*sqrt(1-2*x)*_
-- sqrt(3+5*x)/(2+3*x)^(3/2)+17830424/8751645*sqrt(1-2*x)*_
-- sqrt(3+5*x)/sqrt(2+3*x)
--E 197

```

```

--S 198 of 500
--a0:=integrate(t0,x)
--E 198

```

```

--S 199 of 500
--m0:=a0-r0
--E 199

```

```

--S 200 of 500
--d0:=D(m0,x)
--E 200

```

)clear all

```

--S 201 of 500
t0:=(1-2*x)^(3/2)*(3+5*x)^(5/2)/(2+3*x)^(13/2)
--R
--R
--R          3      2      +-----+ +-----+
--R      (- 50x  - 35x  + 12x + 9)\|- 2x + 1 \|5x + 3
--R (1) -----
--R          6      5      4      3      2      +-----+
--R      (729x  + 2916x  + 4860x  + 4320x  + 2160x  + 576x + 64)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 201

```

```

--S 202 of 500
--r0:=-2/33*(1-2*x)^(3/2)*(3+5*x)^(5/2)/(2+3*x)^(11/2)+
-- 91496584/57760857*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
-- sqrt(33)-3316711588/57760857*elliptic_e(asin(sqrt(5/11)*_
-- sqrt(1-2*x)),33/35)/sqrt(35)-13292/43659*(3+5*x)^(3/2)*_
-- sqrt(1-2*x)/(2+3*x)^(7/2)+362/891*(3+5*x)^(5/2)*sqrt(1-2*x)/_
-- (2+3*x)^(9/2)-1366496/4584195*sqrt(1-2*x)*sqrt(3+5*x)/_
-- (2+3*x)^(5/2)+45748292/96268095*sqrt(1-2*x)*sqrt(3+5*x)/_

```

```

--      (2+3*x)^(3/2)+3316711588/673876665*sqrt(1-2*x)*sqrt(3+5*x)/sqrt(2+3*x)
--E 202

--S 203 of 500
--a0:=integrate(t0,x)
--E 203

--S 204 of 500
--m0:=a0-r0
--E 204

--S 205 of 500
--d0:=D(m0,x)
--E 205

)clear all

--S 206 of 500
t0:=(1-2*x)^(3/2)*(3+5*x)^(5/2)/(2+3*x)^(15/2)
--R
--R
--R (1)
--R      3      2      +-----+ +-----+
--R      (- 50x  - 35x  + 12x + 9)\|- 2x + 1 \|5x + 3
--R /
--R      7      6      5      4      3      2
--R      (2187x  + 10206x  + 20412x  + 22680x  + 15120x  + 6048x  + 1344x + 128)
--R *
--R      +-----+
--R      \|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 206

--S 207 of 500
--r0:=-2/39*(1-2*x)^(3/2)*(3+5*x)^(5/2)/(2+3*x)^(13/2)+
--      7046965448/1752079329*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
--      sqrt(33)-245282464136/1752079329*elliptic_e(asin(sqrt(5/11)*_
--      sqrt(1-2*x)),33/35)/sqrt(35)-20992/81081*(3+5*x)^(3/2)*_
--      sqrt(1-2*x)/(2+3*x)^(9/2)+362/1287*(3+5*x)^(5/2)*_
--      sqrt(1-2*x)/(2+3*x)^(11/2)-2174468/11918907*sqrt(1-2*x)*_
--      sqrt(3+5*x)/(2+3*x)^(7/2)+73596464/417161745*sqrt(1-2*x)*_
--      sqrt(3+5*x)/(2+3*x)^(5/2)+3523482724/2920132215*sqrt(1-2*x)*_
--      sqrt(3+5*x)/(2+3*x)^(3/2)+245282464136/20440925505*_
--      sqrt(1-2*x)*sqrt(3+5*x)/sqrt(2+3*x)
--E 207

--S 208 of 500
--a0:=integrate(t0,x)
--E 208

```

```

--S 209 of 500
--m0:=a0-r0
--E 209

--S 210 of 500
--d0:=D(m0,x)
--E 210

)clear all

--S 211 of 500
t0:=(1-2*x)^(3/2)*(2+3*x)^(5/2)/sqrt(3+5*x)
--R
--R
--R          3      2      +-----+ +-----+
--R      (- 18x  - 15x  + 4x + 4)\|- 2x + 1 \|3x + 2
--R (1) -----
--R                                +-----+
--R                               \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 211

--S 212 of 500
--r0:=87476/253125*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
--      sqrt(33)-6515539/506250*elliptic_e(asin(sqrt(5/11)*_
--      sqrt(1-2*x)),33/35)/sqrt(35)+2/45*(1-2*x)^(3/2)*(2+3*x)^(5/2)*_
--      sqrt(3+5*x)+403/118125*(2+3*x)^(3/2)*sqrt(1-2*x)*sqrt(3+5*x)+_
--      178/4725*(2+3*x)^(5/2)*sqrt(1-2*x)*sqrt(3+5*x)-87476/590625*_
--      sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 212

--S 213 of 500
--a0:=integrate(t0,x)
--E 213

--S 214 of 500
--m0:=a0-r0
--E 214

--S 215 of 500
--d0:=D(m0,x)
--E 215

)clear all

--S 216 of 500
t0:=(1-2*x)^(3/2)*(2+3*x)^(3/2)/sqrt(3+5*x)
--R
--R
--R          2      +-----+ +-----+

```



```

--R      (- 6x  - x + 2)\|- 2x + 1 \|3x + 2
--R (1) -----
--R      +-----+
--R      \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 216

--S 217 of 500
--r0:=487/5625*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-
-- 46159/5625*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/_
-- sqrt(35)+2/35*(1-2*x)^(3/2)*(2+3*x)^(3/2)*sqrt(3+5*x)+_
-- 62/875*(2+3*x)^(3/2)*sqrt(1-2*x)*sqrt(3+5*x)-487/13125*_
-- sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 217

--S 218 of 500
--a0:=integrate(t0,x)
--E 218

--S 219 of 500
--m0:=a0-r0
--E 219

--S 220 of 500
--d0:=D(m0,x)
--E 220

)clear all

--S 221 of 500
t0:=(1-2*x)^(3/2)*sqrt(2+3*x)/sqrt(3+5*x)
--R
--R
--R      +-----+ +-----+
--R      (- 2x + 1)\|- 2x + 1 \|3x + 2
--R (1) -----
--R      +-----+
--R      \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 221

--S 222 of 500
--r0:=-2797/3375*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*_
-- sqrt(7/5)-2828/3375*elliptic_f(asin(sqrt(3/7)*_
-- sqrt(1-2*x)),35/33)/sqrt(33)+2/25*(1-2*x)^(3/2)*sqrt(2+3*x)*_
-- sqrt(3+5*x)+194/1125*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 222

--S 223 of 500
--a0:=integrate(t0,x)

```

```

--E 223

--S 224 of 500
--m0:=a0-r0
--E 224

--S 225 of 500
--d0:=D(m0,x)
--E 225

)clear all

--S 226 of 500
t0:=(1-2*x)^(3/2)/(sqrt(2+3*x)*sqrt(3+5*x))
--R
--R
--R          +-----+
--R      (- 2x + 1)\|- 2x + 1
--R  (1)  -----
--R          +-----+ +-----+
--R          \|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 226

--S 227 of 500
--r0:=272/135*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*sqrt(7/5)-
-- 1442/135*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
-- sqrt(33)-4/45*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 227

--S 228 of 500
--a0:=integrate(t0,x)
--E 228

--S 229 of 500
--m0:=a0-r0
--E 229

--S 230 of 500
--d0:=D(m0,x)
--E 230

)clear all

--S 231 of 500
t0:=(1-2*x)^(3/2)/((2+3*x)^(3/2)*sqrt(3+5*x))
--R
--R
--R          +-----+
--R      (- 2x + 1)\|- 2x + 1

```

```

--R (1) -----
--R          +-----+ +-----+
--R      (3x + 2)\|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 231

--S 232 of 500
--r0:=-74/9*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*sqrt(7/5)+
-- 56/9*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)+
-- 2*(1-2*x)^(3/2)*sqrt(3+5*x)/sqrt(2+3*x)+4/3*sqrt(1-2*x)*
-- sqrt(2+3*x)*sqrt(3+5*x)
--E 232

--S 233 of 500
--a0:=integrate(t0,x)
--E 233

--S 234 of 500
--m0:=a0-r0
--E 234

--S 235 of 500
--d0:=D(m0,x)
--E 235

)clear all

--S 236 of 500
t0:=(1-2*x)^(3/2)/((2+3*x)^(5/2)*sqrt(3+5*x))
--R
--R
--R          +-----+
--R      (- 2x + 1)\|- 2x + 1
--R (1) -----
--R          2          +-----+ +-----+
--R      (9x  + 12x + 4)\|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 236

--S 237 of 500
--r0:=116/27*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-
-- 124/27*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*
-- sqrt(35)+2/3*(1-2*x)^(3/2)*sqrt(3+5*x)/(2+3*x)^(3/2)+
-- 128/9*sqrt(1-2*x)*sqrt(3+5*x)/sqrt(2+3*x)
--E 237

--S 238 of 500
--a0:=integrate(t0,x)
--E 238

```

```

--S 239 of 500
--m0:=a0-r0
--E 239

--S 240 of 500
--d0:=D(m0,x)
--E 240

)clear all

--S 241 of 500
t0:=(1-2*x)^(3/2)/((2+3*x)^(7/2)*sqrt(3+5*x))
--R
--R
--R          +-----+
--R      (- 2x + 1)\|- 2x + 1
--R (1)  -----
--R          3      2      +-----+ +-----+
--R      (27x  + 54x  + 36x + 8)\|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 241

--S 242 of 500
--r0:=512/27*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-
-- 17804/27*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/_
-- sqrt(35)+2/5*(1-2*x)^(3/2)*sqrt(3+5*x)/(2+3*x)^(5/2)+_
-- 268/45*sqrt(1-2*x)*sqrt(3+5*x)/(2+3*x)^(3/2)+17804/315*_
-- sqrt(1-2*x)*sqrt(3+5*x)/sqrt(2+3*x)
--E 242

--S 243 of 500
--a0:=integrate(t0,x)
--E 243

--S 244 of 500
--m0:=a0-r0
--E 244

--S 245 of 500
--d0:=D(m0,x)
--E 245

)clear all

--S 246 of 500
t0:=(1-2*x)^(3/2)/((2+3*x)^(9/2)*sqrt(3+5*x))
--R
--R
--R          +-----+
--R      (- 2x + 1)\|- 2x + 1

```

```

--R (1) -----
--R      4      3      2      +-----+ +-----+
--R      (81x  + 216x  + 216x  + 96x + 16)\|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 246

--S 247 of 500
--r0:=36136/441*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-
-- 1255552/441*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/_
-- sqrt(35)+2/7*(1-2*x)^(3/2)*sqrt(3+5*x)/(2+3*x)^(7/2)+_
-- 136/35*sqrt(1-2*x)*sqrt(3+5*x)/(2+3*x)^(5/2)+18068/735*_
-- sqrt(1-2*x)*sqrt(3+5*x)/(2+3*x)^(3/2)+1255552/5145*_
-- sqrt(1-2*x)*sqrt(3+5*x)/sqrt(2+3*x)
--E 247

--S 248 of 500
--a0:=integrate(t0,x)
--E 248

--S 249 of 500
--m0:=a0-r0
--E 249

--S 250 of 500
--d0:=D(m0,x)
--E 250

)clear all

--S 251 of 500
t0:=(1-2*x)^(3/2)*(2+3*x)^(7/2)/(3+5*x)^(3/2)
--R
--R
--R      4      3      2      +-----+ +-----+
--R      (- 54x  - 81x  - 18x  + 20x + 8)\|- 2x + 1 \|3x + 2
--R (1) -----
--R
--R      +-----+
--R      (5x + 3)\|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 251

--S 252 of 500
--r0:=12601/84375*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
-- sqrt(33)-1473539/168750*elliptic_e(asin(sqrt(5/11)*_
-- sqrt(1-2*x)),33/35)/sqrt(35)-2/5*(1-2*x)^(3/2)*(2+3*x)^(7/2)/_
-- sqrt(3+5*x)+5153/39375*(2+3*x)^(3/2)*sqrt(1-2*x)*sqrt(3+5*x)+_
-- 958/1575*(2+3*x)^(5/2)*sqrt(1-2*x)*sqrt(3+5*x)-8/45*(2+3*x)^(7/2)*_
-- sqrt(1-2*x)*sqrt(3+5*x)-12601/196875*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 252

```

```

--S 253 of 500
--a0:=integrate(t0,x)
--E 253

--S 254 of 500
--m0:=a0-r0
--E 254

--S 255 of 500
--d0:=D(m0,x)
--E 255

)clear all

--S 256 of 500
t0:=(1-2*x)^(3/2)*(2+3*x)^(5/2)/(3+5*x)^(3/2)
--R
--R
--R          3      2      +-----+ +-----+
--R      (- 18x  - 15x  + 4x + 4)\|- 2x + 1 \|3x + 2
--R (1) -----
--R                               +-----+
--R                          (5x + 3)\|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 256

--S 257 of 500
--r0:=-2719/9375*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-
-- 47342/9375*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/_
-- sqrt(35)-2/5*(1-2*x)^(3/2)*(2+3*x)^(5/2)/sqrt(3+5*x)+_
-- 2818/4375*(2+3*x)^(3/2)*sqrt(1-2*x)*sqrt(3+5*x)-_
-- 32/175*(2+3*x)^(5/2)*sqrt(1-2*x)*sqrt(3+5*x)+_
-- 2719/21875*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 257

--S 258 of 500
--a0:=integrate(t0,x)
--E 258

--S 259 of 500
--m0:=a0-r0
--E 259

--S 260 of 500
--d0:=D(m0,x)
--E 260

)clear all

--S 261 of 500

```

```

t0:=(1-2*x)^(3/2)*(2+3*x)^(3/2)/(3+5*x)^(3/2)
--R
--R
--R      2      +-----+ +-----+
--R      (- 6x  - x + 2)\|- 2x + 1 \|3x + 2
--R (1) -----
--R      +-----+
--R      (5x + 3)\|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 261

--S 262 of 500
--r0:=-169/1875*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*_
-- sqrt(7/5)-3206/1875*elliptic_f(asin(sqrt(3/7)*_
-- sqrt(1-2*x)),35/33)/sqrt(33)-2/5*(1-2*x)^(3/2)*(2+3*x)^(3/2)/_
-- sqrt(3+5*x)-24/125*(2+3*x)^(3/2)*sqrt(1-2*x)*sqrt(3+5*x)+_
-- 458/625*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 262

--S 263 of 500
--a0:=integrate(t0,x)
--E 263

--S 264 of 500
--m0:=a0-r0
--E 264

--S 265 of 500
--d0:=D(m0,x)
--E 265

)clear all

--S 266 of 500
t0:=(1-2*x)^(3/2)*sqrt(2+3*x)/(3+5*x)^(3/2)
--R
--R
--R      +-----+ +-----+
--R      (- 2x + 1)\|- 2x + 1 \|3x + 2
--R (1) -----
--R      +-----+
--R      (5x + 3)\|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 266

--S 267 of 500
--r0:=458/225*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*sqrt(7/5)-_
-- 1358/225*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
-- sqrt(33)-2/5*(1-2*x)^(3/2)*sqrt(2+3*x)/sqrt(3+5*x)-_
-- 16/75*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)

```

```

--E 267

--S 268 of 500
--a0:=integrate(t0,x)
--E 268

--S 269 of 500
--m0:=a0-r0
--E 269

--S 270 of 500
--d0:=D(m0,x)
--E 270

)clear all

--S 271 of 500
t0:=(1-2*x)^(3/2)/((3+5*x)^(3/2)*sqrt(2+3*x))
--R
--R
--R              +-----+
--R      (- 2x + 1)\|- 2x + 1
--R  (1)  -----
--R              +-----+ +-----+
--R      (5x + 3)\|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 271

--S 272 of 500
--r0:=62/15*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*sqrt(7/5)+
-- 28/15*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-
-- 2*(1-2*x)^(3/2)*sqrt(2+3*x)/sqrt(3+5*x)-4/5*sqrt(1-2*x)*
-- sqrt(2+3*x)*sqrt(3+5*x)
--E 272

--S 273 of 500
--a0:=integrate(t0,x)
--E 273

--S 274 of 500
--m0:=a0-r0
--E 274

--S 275 of 500
--d0:=D(m0,x)
--E 275

)clear all

--S 276 of 500

```



```

t0:=(1-2*x)^(3/2)/((2+3*x)^(3/2)*(3+5*x)^(3/2))
--R
--R
--R          +-----+
--R      (- 2x + 1)\|- 2x + 1
--R (1)  -----
--R          2          +-----+ +-----+
--R      (15x  + 19x + 6)\|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 276

--S 277 of 500
--r0:=136/3*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*sqrt(7/5)-
-- 28/3*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)+
-- 2*(1-2*x)^(3/2)/(sqrt(2+3*x)*sqrt(3+5*x))-44*sqrt(1-2*x)*
-- sqrt(2+3*x)/sqrt(3+5*x)
--E 277

--S 278 of 500
--a0:=integrate(t0,x)
--E 278

--S 279 of 500
--m0:=a0-r0
--E 279

--S 280 of 500
--d0:=D(m0,x)
--E 280

)clear all

--S 281 of 500
t0:=(1-2*x)^(3/2)/((2+3*x)^(5/2)*(3+5*x)^(3/2))
--R
--R
--R          +-----+
--R      (- 2x + 1)\|- 2x + 1
--R (1)  -----
--R          3      2          +-----+ +-----+
--R      (45x  + 87x  + 56x + 12)\|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 281

--S 282 of 500
--r0:=-536/9*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)+
-- 532/9*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*
-- sqrt(35)+2/3*(1-2*x)^(3/2)/((2+3*x)^(3/2)*sqrt(3+5*x))+
-- 268/9*sqrt(1-2*x)/(sqrt(2+3*x)*sqrt(3+5*x))-2660/9*
-- sqrt(1-2*x)*sqrt(2+3*x)/sqrt(3+5*x)

```

```

--E 282

--S 283 of 500
--a0:=integrate(t0,x)
--E 283

--S 284 of 500
--m0:=a0-r0
--E 284

--S 285 of 500
--d0:=D(m0,x)
--E 285

)clear all

--S 286 of 500
t0:=(1-2*x)^(3/2)/((2+3*x)^(7/2)*(3+5*x)^(3/2))
--R
--R
--R
--R
--R (1) 
$$\frac{(-2x + 1)\sqrt{-2x + 1}}{(135x^4 + 351x^3 + 342x^2 + 148x + 24)\sqrt{3x + 2}\sqrt{5x + 3}}$$

--R
--R                                          Type: Expression(Integer)
--E 286

--S 287 of 500
--r0:=-1064/3*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)+_
-- 36968/3*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/_
-- sqrt(35)+2/5*(1-2*x)^(3/2)/((2+3*x)^(5/2)*sqrt(3+5*x))+_
-- 136/15*sqrt(1-2*x)/((2+3*x)^(3/2)*sqrt(3+5*x))+6116/35*_
-- sqrt(1-2*x)/(sqrt(2+3*x)*sqrt(3+5*x))-36968/21*sqrt(1-2*x)*_
-- sqrt(2+3*x)/sqrt(3+5*x)
--E 287

--S 288 of 500
--a0:=integrate(t0,x)
--E 288

--S 289 of 500
--m0:=a0-r0
--E 289

--S 290 of 500
--d0:=D(m0,x)
--E 290

)clear all

```

```

--S 291 of 500
t0:=(1-2*x)^(3/2)/((2+3*x)^(9/2)*(3+5*x)^(3/2))
--R 
--R 
--R               +-----+
--R           (- 2x + 1)\|- 2x + 1
--R (1) -----
--R          5      4      3      2      +-----+ +-----+
--R    (405x  + 1323x  + 1728x  + 1128x  + 368x + 48)\|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 291

--S 292 of 500
--r0:=-296816/147*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)+
-- 10312712/147*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/_
-- sqrt(35)+2/7*(1-2*x)^(3/2)/((2+3*x)^(7/2)*sqrt(3+5*x))+_
-- 548/105*sqrt(1-2*x)/((2+3*x)^(5/2)*sqrt(3+5*x))+12276/245*_
-- sqrt(1-2*x)/((2+3*x)^(3/2)*sqrt(3+5*x))+1706144/1715*_
-- sqrt(1-2*x)/(sqrt(2+3*x)*sqrt(3+5*x))-10312712/1029*sqrt(1-2*x)*_
-- sqrt(2+3*x)/sqrt(3+5*x)
--E 292

--S 293 of 500
--a0:=integrate(t0,x)
--E 293

--S 294 of 500
--m0:=a0-r0
--E 294

--S 295 of 500
--d0:=D(m0,x)
--E 295

)clear all

--S 296 of 500
t0:=(1-2*x)^(3/2)*(2+3*x)^(7/2)/(3+5*x)^(5/2)
--R 
--R 
--R          4      3      2      +-----+ +-----+
--R    (- 54x  - 81x  - 18x  + 20x + 8)\|- 2x + 1 \|3x + 2
--R (1) -----
--R              2      +-----+
--R    (25x  + 30x + 9)\|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 296

--S 297 of 500

```

```

--r0:=-2/15*(1-2*x)^(3/2)*(2+3*x)^(7/2)/(3+5*x)^(3/2)-
-- 4801/9375*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-
-- 25643/9375*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/_
-- sqrt(35)-6*(2+3*x)^(7/2)*sqrt(1-2*x)/sqrt(3+5*x)+_
-- 3872/4375*(2+3*x)^(3/2)*sqrt(1-2*x)*sqrt(3+5*x)+_
-- 622/175*(2+3*x)^(5/2)*sqrt(1-2*x)*sqrt(3+5*x)+_
-- 4801/21875*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 297

--S 298 of 500
--a0:=integrate(t0,x)
--E 298

--S 299 of 500
--m0:=a0-r0
--E 299

--S 300 of 500
--d0:=D(m0,x)
--E 300

)clear all

--S 301 of 500
t0:=(1-2*x)^(3/2)*(2+3*x)^(5/2)/(3+5*x)^(5/2)
--R
--R
--R          3      2      +-----+ +-----+
--R      (- 18x  - 15x  + 4x + 4)\|- 2x + 1 \|3x + 2
--R (1) -----
--R          2      +-----+
--R      (25x  + 30x + 9)\|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 301

--S 302 of 500
--r0:=-2/15*(1-2*x)^(3/2)*(2+3*x)^(5/2)/(3+5*x)^(3/2)+_
-- 1973/9375*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*_
-- sqrt(7/5)-15848/9375*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
-- sqrt(33)-106/25*(2+3*x)^(5/2)*sqrt(1-2*x)/sqrt(3+5*x)+_
-- 1558/625*(2+3*x)^(3/2)*sqrt(1-2*x)*sqrt(3+5*x)+2264/3125*_
-- sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 302

--S 303 of 500
--a0:=integrate(t0,x)
--E 303

--S 304 of 500
--m0:=a0-r0

```

```

--E 304

--S 305 of 500
--d0:=D(m0,x)
--E 305

)clear all

--S 306 of 500
t0:=(1-2*x)^(3/2)*(2+3*x)^(3/2)/(3+5*x)^(5/2)
--R
--R
--R          2          +-----+ +-----+
--R      (- 6x  - x + 2)\|- 2x + 1 \|3x + 2
--R (1) -----
--R          2          +-----+
--R      (25x  + 30x + 9)\|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 306

--S 307 of 500
--r0:=-2/15*(1-2*x)^(3/2)*(2+3*x)^(3/2)/(3+5*x)^(3/2)+_
-- 496/375*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*_
-- sqrt(7/5)-1246/375*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
-- sqrt(33)-62/25*(2+3*x)^(3/2)*sqrt(1-2*x)/sqrt(3+5*x)+_
-- 178/125*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 307

--S 308 of 500
--a0:=integrate(t0,x)
--E 308

--S 309 of 500
--m0:=a0-r0
--E 309

--S 310 of 500
--d0:=D(m0,x)
--E 310

)clear all

--S 311 of 500
t0:=(1-2*x)^(3/2)*sqrt(2+3*x)/(3+5*x)^(5/2)
--R
--R
--R          +-----+ +-----+
--R      (- 2x + 1)\|- 2x + 1 \|3x + 2
--R (1) -----
--R          2          +-----+

```

```

--R          (25x  + 30x + 9)\|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 311

--S 312 of 500
--r0:=38/75*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*sqrt(7/5)+_
-- 112/75*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-_
-- 2/15*(1-2*x)^(3/2)*sqrt(2+3*x)/(3+5*x)^(3/2)-_
-- 18/25*sqrt(1-2*x)*sqrt(2+3*x)/sqrt(3+5*x)
--E 312

--S 313 of 500
--a0:=integrate(t0,x)
--E 313

--S 314 of 500
--m0:=a0-r0
--E 314

--S 315 of 500
--d0:=D(m0,x)
--E 315

)clear all

--S 316 of 500
t0:=(1-2*x)^(3/2)/((3+5*x)^(5/2)*sqrt(2+3*x))
--R
--R
--R          +-----+
--R      (- 2x + 1)\|- 2x + 1
--R  (1)  -----
--R          2          +-----+ +-----+
--R      (25x  + 30x + 9)\|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 316

--S 317 of 500
--r0:=-148/15*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*sqrt(7/5)+_
-- 28/15*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-_
-- 2/3*(1-2*x)^(3/2)*sqrt(2+3*x)/(3+5*x)^(3/2)+48/5*sqrt(1-2*x)*_
-- sqrt(2+3*x)/sqrt(3+5*x)
--E 317

--S 318 of 500
--a0:=integrate(t0,x)
--E 318

--S 319 of 500
--m0:=a0-r0

```

```

--E 319

--S 320 of 500
--d0:=D(m0,x)
--E 320

)clear all

--S 321 of 500
t0:=(1-2*x)^(3/2)/((2+3*x)^(3/2)*(3+5*x)^(5/2))
--R
--R
--R              +-----+
--R      (- 2x + 1)\|- 2x + 1
--R (1) -----
--R      3      2      +-----+ +-----+
--R      (75x  + 140x  + 87x + 18)\|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 321

--S 322 of 500
--r0:=-556/3*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*sqrt(7/5)+_
-- 112/3*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)+_
-- 2*(1-2*x)^(3/2)/((3+5*x)^(3/2)*sqrt(2+3*x))-88/3*sqrt(1-2*x)*_
-- sqrt(2+3*x)/(3+5*x)^(3/2)+556/3*sqrt(1-2*x)*sqrt(2+3*x)/sqrt(3+5*x)
--E 322

--S 323 of 500
--a0:=integrate(t0,x)
--E 323

--S 324 of 500
--m0:=a0-r0
--E 324

--S 325 of 500
--d0:=D(m0,x)
--E 325

)clear all

--S 326 of 500
t0:=(1-2*x)^(3/2)/((2+3*x)^(5/2)*(3+5*x)^(5/2))
--R
--R
--R              +-----+
--R      (- 2x + 1)\|- 2x + 1
--R (1) -----
--R      4      3      2      +-----+ +-----+
--R      (225x  + 570x  + 541x  + 228x + 36)\|3x + 2 \|5x + 3

```

```

--R
--R                                          Type: Expression(Integer)
--E 326

--S 327 of 500
--r0:=2/3*(1-2*x)^(3/2)/((2+3*x)^(3/2)*(3+5*x)^(3/2))+
--      1096/3*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-
--      1088/3*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*sqrt(35)+
--      136/3*sqrt(1-2*x)/((3+5*x)^(3/2)*sqrt(2+3*x))-300*sqrt(1-2*x)*
--      sqrt(2+3*x)/(3+5*x)^(3/2)+5440/3*sqrt(1-2*x)*sqrt(2+3*x)/sqrt(3+5*x)
--E 327

--S 328 of 500
--a0:=integrate(t0,x)
--E 328

--S 329 of 500
--m0:=a0-r0
--E 329

--S 330 of 500
--d0:=D(m0,x)
--E 330

)clear all

--S 331 of 500
t0:=(1-2*x)^(3/2)/((2+3*x)^(7/2)*(3+5*x)^(5/2))
--R
--R
--R                                          +-----+
--R                                          (- 2x + 1)\|- 2x + 1
--R (1) -----
--R           5       4       3       2             +-----+ +-----+
--R      (675x  + 2160x  + 2763x  + 1766x  + 564x + 72)\|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 331

--S 332 of 500
--r0:=2/5*(1-2*x)^(3/2)/((2+3*x)^(5/2)*(3+5*x)^(3/2))+
--      8672/3*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-
--      301304/3*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/
--      sqrt(35)+548/45*sqrt(1-2*x)/((2+3*x)^(3/2)*(3+5*x)^(3/2))+
--      111884/315*sqrt(1-2*x)/((3+5*x)^(3/2)*sqrt(2+3*x))-
--      16616/7*sqrt(1-2*x)*sqrt(2+3*x)/(3+5*x)^(3/2)+
--      301304/21*sqrt(1-2*x)*sqrt(2+3*x)/sqrt(3+5*x)
--E 332

--S 333 of 500
--a0:=integrate(t0,x)
--E 333

```



```

--S 334 of 500
--m0:=a0-r0
--E 334

--S 335 of 500
--d0:=D(m0,x)
--E 335

)clear all

--S 336 of 500
t0:=(1-2*x)^(5/2)*(2+3*x)^(5/2)*sqrt(3+5*x)
--R
--R
--R      4      3      2      +-----+ +-----+ +-----+
--R (1) (36x  + 12x  - 23x  - 4x + 4)\|- 2x + 1 \|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 336

--S 337 of 500
--r0:=62/2145*(1-2*x)^(3/2)*(2+3*x)^(5/2)*(3+5*x)^(3/2)+_
-- 2/65*(1-2*x)^(5/2)*(2+3*x)^(5/2)*(3+5*x)^(3/2)+_
-- 67138787/72393750*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
-- sqrt(33)-1163388067/36196875*elliptic_e(asin(sqrt(5/11)*_
-- sqrt(1-2*x)),33/35)/sqrt(35)+32717/1126125*(2+3*x)^(3/2)*_
-- (3+5*x)^(3/2)*sqrt(1-2*x)+34/2475*(2+3*x)^(5/2)*(3+5*x)^(3/2)*_
-- sqrt(1-2*x)-445024/9384375*(3+5*x)^(3/2)*sqrt(1-2*x)*_
-- sqrt(2+3*x)-69808931/168918750*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 337

--S 338 of 500
--a0:=integrate(t0,x)
--E 338

--S 339 of 500
--m0:=a0-r0
--E 339

--S 340 of 500
--d0:=D(m0,x)
--E 340

)clear all

--S 341 of 500
t0:=(1-2*x)^(5/2)*(2+3*x)^(3/2)*sqrt(3+5*x)
--R
--R
--R      3      2      +-----+ +-----+ +-----+

```

```

--R (1) (12x2 - 4x - 5x + 2)\|- 2x + 1 \|3x + 2 \|5x + 3
--R                                          Type: Expression(Integer)
--E 341

--S 342 of 500
--r0:=106/2475*(1-2*x)^(3/2)*(2+3*x)^(3/2)*(3+5*x)^(3/2)+2/55*(1-2*x)^(5/2)*_
-- (2+3*x)^(3/2)*(3+5*x)^(3/2)+4854274/8353125*_
-- elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-_
-- 326256461/16706250*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/_
-- sqrt(35)+2866/86625*(2+3*x)^(3/2)*(3+5*x)^(3/2)*sqrt(1-2*x)+_
-- 38729/2165625*(3+5*x)^(3/2)*sqrt(1-2*x)*sqrt(2+3*x)-_
-- 4738087/19490625*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 342

--S 343 of 500
--a0:=integrate(t0,x)
--E 343

--S 344 of 500
--m0:=a0-r0
--E 344

--S 345 of 500
--d0:=D(m0,x)
--E 345

)clear all

--S 346 of 500
t0:=(1-2*x)^(5/2)*sqrt(2+3*x)*sqrt(3+5*x)
--R
--R
--R          2      +-----+ +-----+ +-----+
--R (1) (4x2 - 4x + 1)\|- 2x + 1 \|3x + 2 \|5x + 3
--R                                          Type: Expression(Integer)
--E 346

--S 347 of 500
--r0:=284159/455625*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
-- sqrt(33)-6799613/455625*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/_
-- sqrt(35)+326/4725*(1-2*x)^(3/2)*(3+5*x)^(3/2)*sqrt(2+3*x)+_
-- 2/45*(1-2*x)^(5/2)*(3+5*x)^(3/2)*sqrt(2+3*x)+_
-- 10214/118125*(3+5*x)^(3/2)*sqrt(1-2*x)*sqrt(2+3*x)-_
-- 110717/1063125*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 347

--S 348 of 500
--a0:=integrate(t0,x)
--E 348

```

--S 349 of 500

--m0:=a0-r0

--E 349

--S 350 of 500

--d0:=D(m0,x)

--E 350

)clear all

--S 351 of 500

t0:=(1-2*x)^(5/2)*sqrt(3+5*x)/sqrt(2+3*x)

--R

--R

--R
$$(4x^2 - 4x + 1)\sqrt{-2x + 1}\sqrt{5x + 3}$$

--R (1) -----

--R
$$\sqrt{3x + 2}$$

--R

--R

Type: Expression(Integer)

--E 351

--S 352 of 500

--r0:=16088/3375*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-
86741/3375*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/sqrt(35)+
118/525*(1-2*x)^(3/2)*sqrt(2+3*x)*sqrt(3+5*x)+2/21*(1-2*x)^(5/2)*
sqrt(2+3*x)*sqrt(3+5*x)+4282/7875*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)

--E 352

--S 353 of 500

--a0:=integrate(t0,x)

--E 353

--S 354 of 500

--m0:=a0-r0

--E 354

--S 355 of 500

--d0:=D(m0,x)

--E 355

)clear all

--S 356 of 500

t0:=(1-2*x)^(5/2)*sqrt(3+5*x)/(2+3*x)^(3/2)

--R

--R

--R
$$(4x^2 - 4x + 1)\sqrt{-2x + 1}\sqrt{5x + 3}$$

--R (1) -----

```

--R          +-----+
--R      (3x + 2)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 356

--S 357 of 500
--r0:=31588/2025*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*_
--  sqrt(7/5)-96838/2025*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
--  sqrt(33)-2/3*(1-2*x)^(5/2)*sqrt(3+5*x)/sqrt(2+3*x)-_
--  8/15*(1-2*x)^(3/2)*sqrt(2+3*x)*sqrt(3+5*x)-1076/675*_
--  sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 357

--S 358 of 500
--a0:=integrate(t0,x)
--E 358

--S 359 of 500
--m0:=a0-r0
--E 359

--S 360 of 500
--d0:=D(m0,x)
--E 360

)clear all

--S 361 of 500
t0:=(1-2*x)^(5/2)*sqrt(3+5*x)/(2+3*x)^(5/2)
--E 361

--S 362 of 500
--r0:=-4418/243*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*_
--  sqrt(7/5)+8288/243*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
--  sqrt(33)-2/9*(1-2*x)^(5/2)*sqrt(3+5*x)/(2+3*x)^(3/2)+_
--  10/3*(1-2*x)^(3/2)*sqrt(3+5*x)/sqrt(2+3*x)+196/81*sqrt(1-2*x)*_
--  sqrt(2+3*x)*sqrt(3+5*x)
--E 362

--S 363 of 500
--Ra0:=integrate(t0,x)
--R
--R
--R      (1)  t0 x
--R
--R                                          Type: Polynomial(Fraction(Integer))
--E 363

--S 364 of 500
--Rm0:=a0-r0
--R

```

```

--R
--R (2) t0 x - r0
--R
--R                                          Type: Polynomial(Fraction(Integer))
--E 364

--S 365 of 500
--Rd0:=D(m0,x)
--R
--R
--R (3) t0
--R
--R                                          Type: Polynomial(Fraction(Integer))
--E 365

)clear all

--S 366 of 500
t0:=(1-2*x)^(5/2)*sqrt(3+5*x)/(2+3*x)^(7/2)
--R
--R
--R          2          +-----+ +-----+
--R (1)  (4x  - 4x + 1)\|- 2x + 1 \|5x + 3
--R -----
--R          3          2          +-----+
--R (27x  + 54x  + 36x + 8)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 366

--S 367 of 500
--r0:=-12*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*sqrt(7/5)-
-- 4*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-
-- 2/15*(1-2*x)^(5/2)*sqrt(3+5*x)/(2+3*x)^(5/2)+2/3*(1-2*x)^(3/2)*
-- sqrt(3+5*x)/(2+3*x)^(3/2)+8*sqrt(1-2*x)*sqrt(3+5*x)/sqrt(2+3*x)
--E 367

--S 368 of 500
--a0:=integrate(t0,x)
--E 368

--S 369 of 500
--m0:=a0-r0
--E 369

--S 370 of 500
--d0:=D(m0,x)
--E 370

)clear all

--S 371 of 500
t0:=(1-2*x)^(5/2)*sqrt(3+5*x)/(2+3*x)^(9/2)

```

```

--R
--R
--R          2          +-----+ +-----+
--R      (4x  - 4x + 1)\|- 2x + 1 \|5x + 3
--R  (1)  -----
--R          4          3          2          +-----+
--R      (81x  + 216x  + 216x  + 96x + 16)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 371

--S 372 of 500
--r0:=-36052/567*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*sqrt(5/7)+
-- 5360/567*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
-- sqrt(33)-2/21*(1-2*x)^(5/2)*sqrt(3+5*x)/(2+3*x)^(7/2)+2/7*_
-- (1-2*x)^(3/2)*sqrt(3+5*x)/(2+3*x)^(5/2)+524/189*sqrt(1-2*x)*_
-- sqrt(3+5*x)/(2+3*x)^(3/2)+36052/1323*sqrt(1-2*x)*sqrt(3+5*x)/sqrt(2+3*x)
--E 372

--S 373 of 500
--a0:=integrate(t0,x)
--E 373

--S 374 of 500
--m0:=a0-r0
--E 374

--S 375 of 500
--d0:=D(m0,x)
--E 375

)clear all

--S 376 of 500
t0:=(1-2*x)^(5/2)*sqrt(3+5*x)/(2+3*x)^(11/2)
--R
--R
--R          2          +-----+ +-----+
--R      (4x  - 4x + 1)\|- 2x + 1 \|5x + 3
--R  (1)  -----
--R          5          4          3          2          +-----+
--R      (243x  + 810x  + 1080x  + 720x  + 240x + 32)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 376

--S 377 of 500
--r0:=-7810384/35721*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*_
-- sqrt(5/7)+1124360/35721*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
-- sqrt(33)-2/27*(1-2*x)^(5/2)*sqrt(3+5*x)/(2+3*x)^(9/2)+_
-- 10/63*(1-2*x)^(3/2)*sqrt(3+5*x)/(2+3*x)^(7/2)+832/567*_
-- sqrt(1-2*x)*sqrt(3+5*x)/(2+3*x)^(5/2)+112436/11907*sqrt(1-2*x)*_

```

```

--      sqrt(3+5*x)/(2+3*x)^(3/2)+7810384/83349*sqrt(1-2*x)*_
--      sqrt(3+5*x)/sqrt(2+3*x)
--E 377

--S 378 of 500
--a0:=integrate(t0,x)
--E 378

--S 379 of 500
--m0:=a0-r0
--E 379

--S 380 of 500
--d0:=D(m0,x)
--E 380

)clear all

--S 381 of 500
t0:=(1-2*x)^(5/2)*sqrt(3+5*x)/(2+3*x)^(13/2)
--R
--R
--R
--R
--R      2      +-----+ +-----+
--R      (4x  - 4x + 1)\|- 2x + 1 \|5x + 3
--R (1) -----
--R      6      5      4      3      2      +-----+
--R      (729x  + 2916x  + 4860x  + 4320x  + 2160x  + 576x + 64)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 381

--S 382 of 500
--r0:=-247408648/305613*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*_
--      sqrt(5/7)+35604320/305613*elliptic_f(asin(sqrt(3/7)*_
--      sqrt(1-2*x)),35/33)/sqrt(33)-2/33*(1-2*x)^(5/2)*sqrt(3+5*x)/_
--      (2+3*x)^(11/2)+10/99*(1-2*x)^(3/2)*sqrt(3+5*x)/(2+3*x)^(9/2)+_
--      1900/2079*sqrt(1-2*x)*sqrt(3+5*x)/(2+3*x)^(7/2)+_
--      76492/14553*sqrt(1-2*x)*sqrt(3+5*x)/(2+3*x)^(5/2)+_
--      3560432/101871*sqrt(1-2*x)*sqrt(3+5*x)/(2+3*x)^(3/2)+_
--      247408648/713097*sqrt(1-2*x)*sqrt(3+5*x)/sqrt(2+3*x)
--E 382

--S 383 of 500
--a0:=integrate(t0,x)
--E 383

--S 384 of 500
--m0:=a0-r0
--E 384

--S 385 of 500

```

```

--d0:=D(m0,x)
--E 385

)clear all

--S 386 of 500
t0:=(1-2*x)^(5/2)*(2+3*x)^(5/2)*(3+5*x)^(3/2)
--R
--R
--R          5      4      3      2      +-----+ +-----+ +-----+
--R (1) (180x  + 168x  - 79x  - 89x  + 8x + 12)\|- 2x + 1 \|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 386

--S 387 of 500
--r0:=62/2925*(1-2*x)^(3/2)*(2+3*x)^(5/2)*(3+5*x)^(5/2)+2/75*(1-2*x)^(5/2)*_
-- (2+3*x)^(5/2)*(3+5*x)^(5/2)+25385346787/9773156250*_
-- elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-_
-- 1764163292393/19546312500*elliptic_e(asin(sqrt(5/11)*_
-- sqrt(1-2*x)),33/35)/sqrt(35)+142391/7239375*(2+3*x)^(3/2)*_
-- (3+5*x)^(5/2)*sqrt(1-2*x)+3698/482625*(2+3*x)^(5/2)*(3+5*x)^(5/2)*_
-- sqrt(1-2*x)-400516993/2533781250*(3+5*x)^(3/2)*sqrt(1-2*x)*_
-- sqrt(2+3*x)-569519/28153125*(3+5*x)^(5/2)*sqrt(1-2*x)*_
-- sqrt(2+3*x)-13267820528/11402015625*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 387

--S 388 of 500
--a0:=integrate(t0,x)
--E 388

--S 389 of 500
--m0:=a0-r0
--E 389

--S 390 of 500
--d0:=D(m0,x)
--E 390

)clear all

--S 391 of 500
t0:=(1-2*x)^(5/2)*(2+3*x)^(3/2)*(3+5*x)^(3/2)
--R
--R
--R          4      3      2      +-----+ +-----+ +-----+
--R (1) (60x  + 16x  - 37x  - 5x + 6)\|- 2x + 1 \|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 391

--S 392 of 500

```



```

--r0:=106/3575*(1-2*x)^(3/2)*(2+3*x)^(3/2)*(3+5*x)^(5/2)+_
-- 2/65*(1-2*x)^(5/2)*(2+3*x)^(3/2)*(3+5*x)^(5/2)+_
-- 880870681/651543750*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
-- sqrt(33)-30660308017/651543750*elliptic_e(asin(sqrt(5/11)*_
-- sqrt(1-2*x)),33/35)/sqrt(35)+8318/482625*(2+3*x)^(3/2)*(3+5*x)^(5/2)*_
-- sqrt(1-2*x)-6794792/84459375*(3+5*x)^(3/2)*sqrt(1-2*x)*_
-- sqrt(2+3*x)+25603/1876875*(3+5*x)^(5/2)*sqrt(1-2*x)*sqrt(2+3*x)-_
-- 923943703/1520268750*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 392

--S 393 of 500
--a0:=integrate(t0,x)
--E 393

--S 394 of 500
--m0:=a0-r0
--E 394

--S 395 of 500
--d0:=D(m0,x)
--E 395

)clear all

--S 396 of 500
t0:=(1-2*x)^(5/2)*(3+5*x)^(3/2)*sqrt(2+3*x)
--R
--R
--R          3      2      +-----+ +-----+ +-----+
--R (1) (20x  - 8x  - 7x + 3)\|- 2x + 1 \|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 396

--S 397 of 500
--r0:=11437073/15035625*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
-- sqrt(33)-829177897/30071250*elliptic_e(asin(sqrt(5/11)*_
-- sqrt(1-2*x)),33/35)/sqrt(35)+326/7425*(1-2*x)^(3/2)*_
-- (3+5*x)^(5/2)*sqrt(2+3*x)+2/55*(1-2*x)^(5/2)*(3+5*x)^(5/2)*_
-- sqrt(2+3*x)-78797/3898125*(3+5*x)^(3/2)*sqrt(1-2*x)*_
-- sqrt(2+3*x)+30362/779625*(3+5*x)^(5/2)*sqrt(1-2*x)*sqrt(2+3*x)-_
-- 12996374/35083125*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 397

--S 398 of 500
--a0:=integrate(t0,x)
--E 398

--S 399 of 500
--m0:=a0-r0
--E 399

```

```

--S 400 of 500
--d0:=D(m0,x)
--E 400

)clear all

--S 401 of 500
t0:=(1-2*x)^(5/2)*(3+5*x)^(3/2)/sqrt(2+3*x)
--R
--R
--R          3      2      +-----+ +-----+
--R      (20x  - 8x  - 7x + 3)\|- 2x + 1 \|5x + 3
--R (1) -----
--R                                +-----+
--R                                \|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 401

--S 402 of 500
--r0:=-150217/273375*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
--      sqrt(33)-4457606/273375*elliptic_e(asin(sqrt(5/11)*_
--      sqrt(1-2*x)),33/35)/sqrt(35)+362/2835*(1-2*x)^(3/2)*(3+5*x)^(3/2)*_
--      sqrt(2+3*x)+2/27*(1-2*x)^(5/2)*(3+5*x)^(3/2)*sqrt(2+3*x)+_
--      14318/70875*(3+5*x)^(3/2)*sqrt(1-2*x)*sqrt(2+3*x)-_
--      429479/637875*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 402

--S 403 of 500
--a0:=integrate(t0,x)
--E 403

--S 404 of 500
--m0:=a0-r0
--E 404

--S 405 of 500
--d0:=D(m0,x)
--E 405

)clear all

--S 406 of 500
t0:=(1-2*x)^(5/2)*(3+5*x)^(3/2)/(2+3*x)^(3/2)
--R
--R
--R          3      2      +-----+ +-----+
--R      (20x  - 8x  - 7x + 3)\|- 2x + 1 \|5x + 3
--R (1) -----
--R                                +-----+

```

```

--R          (3x + 2)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 406

--S 407 of 500
--r0:=145102/6075*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-
-- 481339/6075*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/_
-- sqrt(35)-2/3*(1-2*x)^(5/2)*(3+5*x)^(3/2)/sqrt(2+3*x)-
-- 32/63*(1-2*x)^(3/2)*(3+5*x)^(3/2)*sqrt(2+3*x)-
-- 2108/1575*(3+5*x)^(3/2)*sqrt(1-2*x)*sqrt(2+3*x)+
-- 124724/14175*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 407

--S 408 of 500
--a0:=integrate(t0,x)
--E 408

--S 409 of 500
--m0:=a0-r0
--E 409

--S 410 of 500
--d0:=D(m0,x)
--E 410

)clear all

--S 411 of 500
t0:=(1-2*x)^(5/2)*(3+5*x)^(3/2)/(2+3*x)^(5/2)
--R
--R
--R          3      2      +-----+ +-----+
--R      (20x  - 8x  - 7x + 3)\|- 2x + 1 \|5x + 3
--R  (1) -----
--R          2      +-----+
--R      (9x  + 12x + 4)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 411

--S 412 of 500
--r0:=-2/9*(1-2*x)^(5/2)*(3+5*x)^(3/2)/(2+3*x)^(3/2)+116854/3645*_
-- elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*sqrt(7/5)-
-- 331954/3645*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
-- sqrt(33)+230/27*(1-2*x)^(3/2)*(3+5*x)^(3/2)/sqrt(2+3*x)+
-- 788/135*(3+5*x)^(3/2)*sqrt(1-2*x)*sqrt(2+3*x)-43214/1215*_
-- sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 412

--S 413 of 500
--a0:=integrate(t0,x)

```

```

--E 413

--S 414 of 500
--m0:=a0-r0
--E 414

--S 415 of 500
--d0:=D(m0,x)
--E 415

)clear all

--S 416 of 500
t0:=(1-2*x)^(5/2)*(3+5*x)^(3/2)/(2+3*x)^(7/2)
--R
--R
--R          3      2      +-----+ +-----+
--R      (20x  - 8x  - 7x + 3)\|- 2x + 1 \|5x + 3
--R  (1)  -----
--R          3      2      +-----+
--R      (27x  + 54x  + 36x + 8)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 416

--S 417 of 500
--r0:=-2/15*(1-2*x)^(5/2)*(3+5*x)^(3/2)/(2+3*x)^(5/2)+
-- 46/27*(1-2*x)^(3/2)*(3+5*x)^(3/2)/(2+3*x)^(3/2)-
-- 19174/729*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*
-- sqrt(7/5)+42412/729*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/
-- sqrt(33)-316/27*(3+5*x)^(3/2)*sqrt(1-2*x)/sqrt(2+3*x)+5264/243*_
-- sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 417

--S 418 of 500
--a0:=integrate(t0,x)
--E 418

--S 419 of 500
--m0:=a0-r0
--E 419

--S 420 of 500
--d0:=D(m0,x)
--E 420

)clear all

--S 421 of 500
t0:=(1-2*x)^(5/2)*(3+5*x)^(3/2)/(2+3*x)^(9/2)
--R

```

```

--R
--R      3      2      +-----+ +-----+
--R      (20x  - 8x  - 7x + 3)\|- 2x + 1 \|5x + 3
--R (1) -----
--R      4      3      2      +-----+
--R      (81x  + 216x  + 216x  + 96x + 16)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 421

```

```

--S 422 of 500
--r0:=-2/21*(1-2*x)^(5/2)*(3+5*x)^(3/2)/(2+3*x)^(7/2)+
-- 46/63*(1-2*x)^(3/2)*(3+5*x)^(3/2)/(2+3*x)^(5/2)-
-- 11576/1701*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*
-- sqrt(5/7)-16700/1701*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/
-- sqrt(33)+608/189*(3+5*x)^(3/2)*sqrt(1-2*x)/(2+3*x)^(3/2)-
-- 4244/3969*sqrt(1-2*x)*sqrt(3+5*x)/sqrt(2+3*x)
--E 422

```

```

--S 423 of 500
--a0:=integrate(t0,x)
--E 423

```

```

--S 424 of 500
--m0:=a0-r0
--E 424

```

```

--S 425 of 500
--d0:=D(m0,x)
--E 425

```

```
)clear all
```

```

--S 426 of 500
t0:=(1-2*x)^(5/2)*(3+5*x)^(3/2)/(2+3*x)^(11/2)
--R
--R
--R      3      2      +-----+ +-----+
--R      (20x  - 8x  - 7x + 3)\|- 2x + 1 \|5x + 3
--R (1) -----
--R      5      4      3      2      +-----+
--R      (243x  + 810x  + 1080x  + 720x  + 240x + 32)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 426

```

```

--S 427 of 500
--r0:=-2/27*(1-2*x)^(5/2)*(3+5*x)^(3/2)/(2+3*x)^(9/2)+
-- 230/567*(1-2*x)^(3/2)*(3+5*x)^(3/2)/(2+3*x)^(7/2)-
-- 3545996/107163*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*
-- sqrt(5/7)+564040/107163*elliptic_f(asin(sqrt(3/7)*
-- sqrt(1-2*x)),35/33)/sqrt(33)+1532/567*(3+5*x)^(3/2)*

```

```

--      sqrt(1-2*x)/(2+3*x)^(5/2)-104036/35721*sqrt(1-2*x)*_
--      sqrt(3+5*x)/(2+3*x)^(3/2)+3545996/250047*sqrt(1-2*x)*_
--      sqrt(3+5*x)/sqrt(2+3*x)
--E 427

--S 428 of 500
--a0:=integrate(t0,x)
--E 428

--S 429 of 500
--m0:=a0-r0
--E 429

--S 430 of 500
--d0:=D(m0,x)
--E 430

)clear all

--S 431 of 500
t0:=(1-2*x)^(5/2)*(3+5*x)^(3/2)/(2+3*x)^(13/2)
--R
--R
--R
--R
--R          3      2      +-----+ +-----+
--R      (20x  - 8x  - 7x + 3)\|- 2x + 1 \|5x + 3
--R (1) -----
--R          6      5      4      3      2      +-----+
--R      (729x  + 2916x  + 4860x  + 4320x  + 2160x  + 576x + 64)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 431

--S 432 of 500
--r0:=-2/33*(1-2*x)^(5/2)*(3+5*x)^(3/2)/(2+3*x)^(11/2)+_
--      230/891*(1-2*x)^(3/2)*(3+5*x)^(3/2)/(2+3*x)^(9/2)-_
--      780320008/8251551*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*_
--      sqrt(5/7)+112439720/8251551*elliptic_f(asin(sqrt(3/7)*_
--      sqrt(1-2*x)),35/33)/sqrt(33)+12280/6237*(3+5*x)^(3/2)*_
--      sqrt(1-2*x)/(2+3*x)^(7/2)-325796/130977*sqrt(1-2*x)*_
--      sqrt(3+5*x)/(2+3*x)^(5/2)+11243972/2750517*sqrt(1-2*x)*_
--      sqrt(3+5*x)/(2+3*x)^(3/2)+780320008/19253619*sqrt(1-2*x)*_
--      sqrt(3+5*x)/sqrt(2+3*x)
--E 432

--S 433 of 500
--a0:=integrate(t0,x)
--E 433

--S 434 of 500
--m0:=a0-r0
--E 434

```

```

--S 435 of 500
--d0:=D(m0,x)
--E 435

)clear all

--S 436 of 500
t0:=(1-2*x)^(5/2)*(3+5*x)^(3/2)/(2+3*x)^(15/2)
--R
--R
--R (1)
--R      3      2      +-----+ +-----+
--R      (20x  - 8x  - 7x + 3)\|- 2x + 1 \|5x + 3
--R /
--R      7      6      5      4      3      2
--R      (2187x  + 10206x  + 20412x  + 22680x  + 15120x  + 6048x  + 1344x + 128)
--R *
--R      +-----+
--R      \|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 436

--S 437 of 500
--r0:=-2/39*(1-2*x)^(5/2)*(3+5*x)^(3/2)/(2+3*x)^(13/2)+
-- 230/1287*(1-2*x)^(3/2)*(3+5*x)^(3/2)/(2+3*x)^(11/2)-
-- 75041008472/250297047*elliptic_e(asin(sqrt(5/11)*_
-- sqrt(1-2*x)),33/35)*sqrt(5/7)+10799362480/250297047*_
-- elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)+
-- 1300/891*(3+5*x)^(3/2)*sqrt(1-2*x)/(2+3*x)^(9/2)-
-- 3347620/1702701*sqrt(1-2*x)*sqrt(3+5*x)/(2+3*x)^(7/2)+
-- 23210828/11918907*sqrt(1-2*x)*sqrt(3+5*x)/(2+3*x)^(5/2)+
-- 1079936248/83432349*sqrt(1-2*x)*sqrt(3+5*x)/(2+3*x)^(3/2)+
-- 75041008472/584026443*sqrt(1-2*x)*sqrt(3+5*x)/sqrt(2+3*x)
--E 437

--S 438 of 500
--a0:=integrate(t0,x)
--E 438

--S 439 of 500
--m0:=a0-r0
--E 439

--S 440 of 500
--d0:=D(m0,x)
--E 440

)clear all

```

```

--S 441 of 500
t0:=(1-2*x)^(5/2)*(2+3*x)^(3/2)*(3+5*x)^(5/2)
--R
--R
--R (1)
--R      5      4      3      2      +-----+ +-----+ +-----+
--R (300x  + 260x  - 137x  - 136x  + 15x + 18)\|- 2x + 1 \|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 441

--S 442 of 500
--r0:=106/4875*(1-2*x)^(3/2)*(2+3*x)^(3/2)*(3+5*x)^(7/2)+_
-- 2/75*(1-2*x)^(5/2)*(2+3*x)^(3/2)*(3+5*x)^(7/2)+_
-- 11371367372/2931946875*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
-- sqrt(33)-1580201444291/11727787500*elliptic_e(asin(sqrt(5/11)*_
-- sqrt(1-2*x)),33/35)/sqrt(35)+8038/804375*(2+3*x)^(3/2)*(3+5*x)^(7/2)*_
-- sqrt(1-2*x)-359748241/1520268750*(3+5*x)^(3/2)*sqrt(1-2*x)*_
-- sqrt(2+3*x)-26534891/760134375*(3+5*x)^(5/2)*sqrt(1-2*x)*_
-- sqrt(2+3*x)+364267/36196875*(3+5*x)^(7/2)*sqrt(1-2*x)*sqrt(2+3*x)-_
-- 23763809947/13682418750*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 442

--S 443 of 500
--a0:=integrate(t0,x)
--E 443

--S 444 of 500
--m0:=a0-r0
--E 444

--S 445 of 500
--d0:=D(m0,x)
--E 445

)clear all

--S 446 of 500
t0:=(1-2*x)^(5/2)*(3+5*x)^(5/2)*sqrt(2+3*x)
--R
--R
--R (1)
--R      4      3      2      +-----+ +-----+ +-----+
--R (100x  + 20x  - 59x  - 6x + 9)\|- 2x + 1 \|3x + 2 \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 446

--S 447 of 500
--r0:=469049629/234555750*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
-- sqrt(33)-8120161139/1172778750*elliptic_e(asin(sqrt(5/11)*_
-- sqrt(1-2*x)),33/35)/sqrt(35)+326/10725*(1-2*x)^(3/2)*(3+5*x)^(7/2)*_
-- sqrt(2+3*x)+2/65*(1-2*x)^(5/2)*(3+5*x)^(7/2)*sqrt(2+3*x)-_

```



```

--      3872003/30405375*(3+5*x)^(3/2)*sqrt(1-2*x)*sqrt(2+3*x)-
--      121031/30405375*(3+5*x)^(5/2)*sqrt(1-2*x)*sqrt(2+3*x)+
--      2314/111375*(3+5*x)^(7/2)*sqrt(1-2*x)*sqrt(2+3*x)-
--      486785077/547296750*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 447

--S 448 of 500
--a0:=integrate(t0,x)
--E 448

--S 449 of 500
--m0:=a0-r0
--E 449

--S 450 of 500
--d0:=D(m0,x)
--E 450

)clear all

--S 451 of 500
t0:=(1-2*x)^(5/2)*(3+5*x)^(5/2)/sqrt(2+3*x)
--R
--R
--R
--R      4      3      2      +-----+ +-----+
--R      (100x  + 20x  - 59x  - 6x + 9)\|- 2x + 1 \|5x + 3
--R      (1) -----
--R                                  +-----+
--R                                  \|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 451

--S 452 of 500
--r0:=2617892/1804275*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
--      sqrt(33)-146222113/3608550*elliptic_e(asin(sqrt(5/11)*_
--      sqrt(1-2*x)),33/35)/sqrt(35)+74/891*(1-2*x)^(3/2)*(3+5*x)^(5/2)*_
--      sqrt(2+3*x)+2/33*(1-2*x)^(5/2)*(3+5*x)^(5/2)*sqrt(2+3*x)-
--      146963/467775*(3+5*x)^(3/2)*sqrt(1-2*x)*sqrt(2+3*x)+_
--      9698/93555*(3+5*x)^(5/2)*sqrt(1-2*x)*sqrt(2+3*x)-_
--      1654421/4209975*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 452

--S 453 of 500
--a0:=integrate(t0,x)
--E 453

--S 454 of 500
--m0:=a0-r0
--E 454

```

```
--S 455 of 500
--d0:=D(m0,x)
--E 455
```

```
)clear all
```

```
--S 456 of 500
t0:=(1-2*x)^(5/2)*(3+5*x)^(5/2)/(2+3*x)^(3/2)
--R
--R
--R          4      3      2      +-----+ +-----+
--R      (100x  + 20x  - 59x  - 6x + 9)\|- 2x + 1 \|5x + 3
--R      (1) -----
--R                                 +-----+
--R                                (3x + 2)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 456
```

```
--S 457 of 500
--r0:=-291227/32805*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
--      sqrt(33)-25111/32805*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/_
--      sqrt(35)-2/3*(1-2*x)^(5/2)*(3+5*x)^(5/2)/sqrt(2+3*x)-_
--      40/81*(1-2*x)^(3/2)*(3+5*x)^(5/2)*sqrt(2+3*x)+_
--      64628/8505*(3+5*x)^(3/2)*sqrt(1-2*x)*sqrt(2+3*x)-_
--      2108/1701*(3+5*x)^(5/2)*sqrt(1-2*x)*sqrt(2+3*x)-_
--      310399/76545*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 457
```

```
--S 458 of 500
--a0:=integrate(t0,x)
--E 458
```

```
--S 459 of 500
--m0:=a0-r0
--E 459
```

```
--S 460 of 500
--d0:=D(m0,x)
--E 460
```

```
)clear all
```

```
--S 461 of 500
t0:=(1-2*x)^(5/2)*(3+5*x)^(5/2)/(2+3*x)^(5/2)
--R
--R
--R          4      3      2      +-----+ +-----+
--R      (100x  + 20x  - 59x  - 6x + 9)\|- 2x + 1 \|5x + 3
--R      (1) -----
--R                                 2      +-----+
--R                                 +-----+
```

```

--R          (9x  + 12x + 4)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 461

--S 462 of 500
--r0:=-2/9*(1-2*x)^(5/2)*(3+5*x)^(5/2)/(2+3*x)^(3/2)+
-- 153452/2187*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
-- sqrt(33)-452399/2187*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/_
-- sqrt(35)+370/27*(1-2*x)^(3/2)*(3+5*x)^(5/2)/sqrt(2+3*x)-_
-- 31298/567*(3+5*x)^(3/2)*sqrt(1-2*x)*sqrt(2+3*x)+_
-- 5260/567*(3+5*x)^(5/2)*sqrt(1-2*x)*sqrt(2+3*x)+_
-- 135334/5103*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 462

--S 463 of 500
--a0:=integrate(t0,x)
--E 463

--S 464 of 500
--m0:=a0-r0
--E 464

--S 465 of 500
--d0:=D(m0,x)
--E 465

)clear all

--S 466 of 500
t0:=(1-2*x)^(5/2)*(3+5*x)^(5/2)/(2+3*x)^(7/2)
--R
--R
--R          4      3      2      +-----+ +-----+
--R      (100x  + 20x  - 59x  - 6x + 9)\|- 2x + 1 \|5x + 3
--R      (1) -----
--R          3      2      +-----+
--R      (27x  + 54x  + 36x + 8)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 466

--S 467 of 500
--r0:=-2/15*(1-2*x)^(5/2)*(3+5*x)^(5/2)/(2+3*x)^(5/2)+
-- 74/27*(1-2*x)^(3/2)*(3+5*x)^(5/2)/(2+3*x)^(3/2)+
-- 136028/2187*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*_
-- sqrt(7/5)-374366/2187*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
-- sqrt(33)-6464/81*(3+5*x)^(5/2)*sqrt(1-2*x)/sqrt(2+3*x)+_
-- 11036/81*(3+5*x)^(3/2)*sqrt(1-2*x)*sqrt(2+3*x)-_
-- 48478/729*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 467

```

```

--S 468 of 500
--a0:=integrate(t0,x)
--E 468

--S 469 of 500
--m0:=a0-r0
--E 469

--S 470 of 500
--d0:=D(m0,x)
--E 470

)clear all

--S 471 of 500
t0:=(1-2*x)^(5/2)*(3+5*x)^(5/2)/(2+3*x)^(9/2)
--R
--R
--R
--R          4      3      2      +-----+ +-----+
--R      (100x  + 20x  - 59x  - 6x + 9)\|- 2x + 1 \|5x + 3
--R      (1) -----
--R          4      3      2      +-----+
--R      (81x  + 216x  + 216x  + 96x + 16)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 471

--S 472 of 500
--r0:=-2/21*(1-2*x)^(5/2)*(3+5*x)^(5/2)/(2+3*x)^(7/2)+_
--      74/63*(1-2*x)^(3/2)*(3+5*x)^(5/2)/(2+3*x)^(5/2)-904798/15309*_
--      elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*sqrt(5/7)+_
--      1534520/15309*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
--      sqrt(33)-1844/567*(3+5*x)^(5/2)*sqrt(1-2*x)/(2+3*x)^(3/2)-_
--      62596/3969*(3+5*x)^(3/2)*sqrt(1-2*x)/sqrt(2+3*x)+_
--      1353340/35721*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 472

--S 473 of 500
--a0:=integrate(t0,x)
--E 473

--S 474 of 500
--m0:=a0-r0
--E 474

--S 475 of 500
--d0:=D(m0,x)
--E 475

)clear all

```

```

--S 476 of 500
t0:=(1-2*x)^(5/2)*(3+5*x)^(5/2)/(2+3*x)^(11/2)
--R
--R
--R          4      3      2      +-----+ +-----+
--R      (100x  + 20x  - 59x  - 6x + 9)\|- 2x + 1 \|5x + 3
--R      (1) -----
--R          5      4      3      2      +-----+
--R      (243x  + 810x  + 1080x  + 720x  + 240x + 32)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 476

```

```

--S 477 of 500
--r0:=-2/27*(1-2*x)^(5/2)*(3+5*x)^(5/2)/(2+3*x)^(9/2)+
-- 370/567*(1-2*x)^(3/2)*(3+5*x)^(5/2)/(2+3*x)^(7/2)-
-- 100444/321489*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*
-- sqrt(5/7)-5824540/321489*elliptic_f(asin(sqrt(3/7)*
-- sqrt(1-2*x)),35/33)/sqrt(33)-13316/35721*(3+5*x)^(3/2)*
-- sqrt(1-2*x)/(2+3*x)^(3/2)+2776/1701*(3+5*x)^(5/2)*
-- sqrt(1-2*x)/(2+3*x)^(5/2)-1241596/750141*sqrt(1-2*x)*
-- sqrt(3+5*x)/sqrt(2+3*x)
--E 477

```

```

--S 478 of 500
--a0:=integrate(t0,x)
--E 478

```

```

--S 479 of 500
--m0:=a0-r0
--E 479

```

```

--S 480 of 500
--d0:=D(m0,x)
--E 480

```

```
)clear all
```

```

--S 481 of 500
t0:=(1-2*x)^(5/2)*(3+5*x)^(5/2)/(2+3*x)^(13/2)
--R
--R
--R          4      3      2      +-----+ +-----+
--R      (100x  + 20x  - 59x  - 6x + 9)\|- 2x + 1 \|5x + 3
--R      (1) -----
--R          6      5      4      3      2      +-----+
--R      (729x  + 2916x  + 4860x  + 4320x  + 2160x  + 576x + 64)\|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 481

```

```

--S 482 of 500

```

```

--r0:=-2/33*(1-2*x)^(5/2)*(3+5*x)^(5/2)/(2+3*x)^(11/2)+
-- 370/891*(1-2*x)^(3/2)*(3+5*x)^(5/2)/(2+3*x)^(9/2)-
-- 584888452/24754653*elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)*_
-- sqrt(5/7)+104715680/24754653*elliptic_f(asin(sqrt(3/7)*_
-- sqrt(1-2*x)),35/33)/sqrt(33)-55772/43659*(3+5*x)^(3/2)*_
-- sqrt(1-2*x)/(2+3*x)^(5/2)+36980/18711*(3+5*x)^(5/2)*_
-- sqrt(1-2*x)/(2+3*x)^(7/2)-17089252/8251551*sqrt(1-2*x)*_
-- sqrt(3+5*x)/(2+3*x)^(3/2)+584888452/57760857*sqrt(1-2*x)*_
-- sqrt(3+5*x)/sqrt(2+3*x)
--E 482

--S 483 of 500
--a0:=integrate(t0,x)
--E 483

--S 484 of 500
--m0:=a0-r0
--E 484

--S 485 of 500
--d0:=D(m0,x)
--E 485

)clear all

--S 486 of 500
t0:=(1-2*x)^(5/2)*(3+5*x)^(5/2)/(2+3*x)^(15/2)
--R
--R
--R (1)
--R      4      3      2      +-----+ +-----+
--R      (100x  + 20x  - 59x  - 6x + 9)\|- 2x + 1 \|5x + 3
--R /
--R      7      6      5      4      3      2
--R      (2187x  + 10206x  + 20412x  + 22680x  + 15120x  + 6048x  + 1344x + 128)
--R *
--R      +-----+
--R      \|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 486

--S 487 of 500
--r0:=-2/39*(1-2*x)^(5/2)*(3+5*x)^(5/2)/(2+3*x)^(13/2)+
-- 370/1287*(1-2*x)^(3/2)*(3+5*x)^(5/2)/(2+3*x)^(11/2)-
-- 129922578224/2252673423*elliptic_e(asin(sqrt(5/11)*_
-- sqrt(1-2*x)),33/35)*sqrt(5/7)+18761985160/2252673423*_
-- elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/sqrt(33)-
-- 2622980/1702701*(3+5*x)^(3/2)*sqrt(1-2*x)/(2+3*x)^(7/2)+
-- 60080/34749*(3+5*x)^(5/2)*sqrt(1-2*x)/(2+3*x)^(9/2)-
-- 54281308/35756721*sqrt(1-2*x)*sqrt(3+5*x)/(2+3*x)^(5/2)+

```

```

--      1876198516/750891141*sqrt(1-2*x)*sqrt(3+5*x)/(2+3*x)^(3/2)+_
--      129922578224/5256237987*sqrt(1-2*x)*sqrt(3+5*x)/sqrt(2+3*x)
--E 487

--S 488 of 500
--a0:=integrate(t0,x)
--E 488

--S 489 of 500
--m0:=a0-r0
--E 489

--S 490 of 500
--d0:=D(m0,x)
--E 490

)clear all

--S 491 of 500
t0:=(1-2*x)^(5/2)*(3+5*x)^(5/2)/(2+3*x)^(17/2)
--R
--R
--R (1)
--R      4      3      2      +-----+ +-----+
--R      (100x  + 20x  - 59x  - 6x + 9)\|- 2x + 1 \|5x + 3
--R /
--R      8      7      6      5      4      3      2
--R      6561x  + 34992x  + 81648x  + 108864x  + 90720x  + 48384x  + 16128x
--R +
--R      3072x + 256
--R *
--R      +-----+
--R      \|3x + 2
--R
--R                                          Type: Expression(Integer)
--E 491

--S 492 of 500
--r0:=-2/45*(1-2*x)^(5/2)*(3+5*x)^(5/2)/(2+3*x)^(15/2)+_
--      74/351*(1-2*x)^(3/2)*(3+5*x)^(5/2)/(2+3*x)^(13/2)+_
--      363883755904/15768713961*elliptic_f(asin(sqrt(3/7)*_
--      sqrt(1-2*x)),35/33)/sqrt(33)-12641611554328/15768713961*_
--      elliptic_e(asin(sqrt(5/11)*sqrt(1-2*x)),33/35)/sqrt(35)-_
--      1085156/729729*(3+5*x)^(3/2)*sqrt(1-2*x)/(2+3*x)^(9/2)+_
--      16636/11583*(3+5*x)^(5/2)*sqrt(1-2*x)/(2+3*x)^(11/2)-_
--      112817764/107270163*sqrt(1-2*x)*sqrt(3+5*x)/(2+3*x)^(7/2)+_
--      3914701972/3754455705*sqrt(1-2*x)*sqrt(3+5*x)/(2+3*x)^(5/2)+_
--      181941877952/26281189935*sqrt(1-2*x)*sqrt(3+5*x)/(2+3*x)^(3/2)+_
--      12641611554328/183968329545*sqrt(1-2*x)*sqrt(3+5*x)/sqrt(2+3*x)
--E 492

```

```

--S 493 of 500
--a0:=integrate(t0,x)
--E 493

--S 494 of 500
--m0:=a0-r0
--E 494

--S 495 of 500
--d0:=D(m0,x)
--E 495

)clear all

--S 496 of 500
t0:=(1-2*x)^(5/2)*(2+3*x)^(5/2)/sqrt(3+5*x)
--R
--R
--R          4      3      2      +-----+ +-----+
--R      (36x  + 12x  - 23x  - 4x + 4)\|- 2x + 1 \|3x + 2
--R  (1) -----
--R                                  +-----+
--R                                  \|5x + 3
--R
--R                                          Type: Expression(Integer)
--E 496

--S 497 of 500
--r0:=2865161/8353125*elliptic_f(asin(sqrt(3/7)*sqrt(1-2*x)),35/33)/_
--  sqrt(33)-231061879/16706250*elliptic_e(asin(sqrt(5/11)*_
--  sqrt(1-2*x)),33/35)/sqrt(35)+62/1485*(1-2*x)^(3/2)*(2+3*x)^(5/2)*_
--  sqrt(3+5*x)+2/55*(1-2*x)^(5/2)*(2+3*x)^(5/2)*sqrt(3+5*x)+_
--  181333/3898125*(2+3*x)^(3/2)*sqrt(1-2*x)*sqrt(3+5*x)+_
--  4258/155925*(2+3*x)^(5/2)*sqrt(1-2*x)*sqrt(3+5*x)-_
--  2865161/19490625*sqrt(1-2*x)*sqrt(2+3*x)*sqrt(3+5*x)
--E 497

--S 498 of 500
--a0:=integrate(t0,x)
--E 498

--S 499 of 500
--m0:=a0-r0
--E 499

--S 500 of 500
--d0:=D(m0,x)
--E 500

)spool
)lisp (bye)

```

References

- [1] nothing