Quadratische Funktionen

Rationale Koeffizienten und Lösungen

01)	$f(x) = -\frac{243}{64}x^2 - \frac{27}{32}x + \frac{189}{64}$	$\text{NST} = \left\{-1; \frac{7}{9}\right\}$	$S\left(-\frac{1}{9} \,\middle|\, 3\right)$
02)	$f(x) = \frac{175}{432}x^2 - \frac{35}{108}x - \frac{245}{108}$	$\text{NST} = \left\{-2; \frac{14}{5}\right\}$	$S\left(\frac{2}{5} \,\middle|\, -\frac{7}{3}\right)$
03)	$f(x) = \frac{99}{32}x^2 - \frac{77}{16}x - \frac{55}{96}$	$\text{NST} = \left\{-\frac{1}{9}; \frac{5}{3}\right\}$	$S\left(\frac{7}{9} \,\middle|\, -\frac{22}{9}\right)$
04)	$f(x) = -\frac{75}{128}x^2 + \frac{45}{16}x - \frac{15}{8}$	$\text{NST} = \left\{\frac{4}{5}; 4\right\}$	$S\left(\frac{12}{5} \,\middle|\, \frac{3}{2}\right)$
05)	$f(x) = -\frac{11}{12}x^2 - \frac{143}{54}x + \sqrt{\frac{40}{13}}$	$\text{NST} = \left\{-\frac{31}{9}; \frac{5}{9}\right\}$	$S\left(-\frac{13}{9} \,\middle|\, \frac{11}{3}\right)$
06)	$f(x) = -\frac{112}{529}x^2 - \frac{196}{529}x + \frac{840}{529}$	$\text{NST} = \left\{-\frac{15}{4}; 2\right\}$	$S\left(-\frac{7}{8} \,\middle|\, \frac{7}{4}\right)$
07)	$f(x) = \frac{4}{45}x^2 + \frac{4}{45}x - \frac{8}{15}$	$\text{NST} = \{-3; 2\}$	$S\left(-\frac{1}{2} \,\middle|\, -\frac{5}{9}\right)$
08)	$f(x) = 36x^2 - 204x + 288$	$\text{NST} = \left\{\frac{8}{3}; 3\right\}$	$S\left(\frac{17}{6} \,\middle|\, -1\right)$
09)	$f(x) = -\frac{112}{27}x^2 + \frac{280}{9}x - 56$	$\text{NST} = \left\{3; \frac{9}{2}\right\}$	$S\left(\frac{15}{4} \,\middle|\, \frac{7}{3}\right)$
10)	$f(x) = -\frac{232}{363}x^2 + \frac{348}{121}x + \frac{580}{363}$	$\text{NST} = \left\{-\frac{1}{2}; 5\right\}$	$S\left(\frac{9}{4} \,\middle|\, \frac{29}{6}\right)$
11)	$f(x) = -\frac{48}{49}x^2 + \frac{80}{49}x + \frac{32}{49}$	$\text{NST} = \left\{-\frac{1}{3}; 2\right\}$	$S\left(\frac{5}{6} \,\middle|\, \frac{4}{3}\right)$
12)	$f(x) = \frac{144}{13}x^2 - \frac{536}{13}x + \frac{480}{13}$	$\text{NST} = \left\{\frac{3}{2}; \frac{20}{9}\right\}$	$S\left(\frac{67}{36} \,\middle|\, -\frac{13}{9}\right)$
13)	$f(x) = -\frac{48}{49}x^2 - \frac{40}{49}x + \frac{416}{147}$	$\text{NST} = \left\{-\frac{13}{6}; \frac{4}{3}\right\}$	$S\left(-\frac{5}{12} \,\middle|\, 3\right)$
14)	$f(x) = -\frac{256}{81}x^2 - \frac{64}{81}x + \frac{320}{81}$	$\text{NST} = \left\{-\frac{5}{4}; 1\right\}$	$S\left(-\frac{1}{8} \,\middle|\, 4\right)$
15)	$f(x) = -\frac{24}{289}x^2 + \frac{32}{289}x + \frac{182}{289}$	$\text{NST} = \left\{-\frac{13}{6}; \frac{7}{2}\right\}$	$S\left(\frac{2}{3} \,\middle|\, \frac{2}{3}\right)$
16)	$f(x) = \frac{15}{16}x^2 + \frac{45}{16}x - \frac{105}{64}$	$\text{NST} = \left\{-\frac{7}{2}; \frac{1}{2}\right\}$	$S\left(-\frac{3}{2} \,\middle|\, -\frac{15}{4}\right)$
17)	$f(x) = -\frac{189}{128}x^2 + \frac{105}{64}x + \frac{91}{128}$	$\text{NST} = \left\{-\frac{1}{3}; \frac{13}{9}\right\}$	$S\left(\frac{5}{9} \,\middle|\, \frac{7}{6}\right)$
18)	$f(x) = \frac{5}{6}x^2 - 6x + \frac{299}{30}$	$\text{NST} = \left\{\frac{13}{5}; \frac{23}{5}\right\}$	$S\left(\frac{18}{5} \,\middle|\, -\frac{5}{6}\right)$
19)	$f(x) = -\frac{400}{121}x^2 - \frac{80}{121}x + \frac{480}{121}$	$\text{NST} = \left\{-\frac{6}{5}; 1\right\}$	$S\left(-\frac{1}{10} \,\middle|\, 4\right)$

20) $f(x) = -\frac{243}{80}x^2 - \frac{27}{2}x - \frac{63}{5}$ $\text{NST} = \left\{-\frac{28}{9}; -\frac{4}{3}\right\}$ $S\left(-\frac{20}{9} \;\middle|\; \frac{12}{5}\right)$

21) $f(x) = \frac{3}{2}x^2 - \frac{23}{3}x + \frac{385}{54}$ $\text{NST} = \left\{\frac{11}{9}; \frac{35}{9}\right\}$ $S\left(\frac{23}{9} \;\middle|\; -\frac{8}{3}\right)$

22) $f(x) = -\frac{208}{625}x^2 - \sqrt{\frac{842}{947}}x + \sqrt{\frac{281}{466}}$ $\text{NST} = \left\{-\frac{7}{2}; \frac{2}{3}\right\}$ $S\left(-\frac{17}{12} \;\middle|\; \frac{13}{9}\right)$

23) $f(x) = -\frac{25}{16}x^2 - \frac{15}{8}x + \frac{55}{16}$ $\text{NST} = \left\{-\frac{11}{5}; 1\right\}$ $S\left(-\frac{3}{5} \;\middle|\; 4\right)$

24) $f(x) = \frac{27}{32}x^2 + \frac{63}{16}x + \frac{99}{32}$ $\text{NST} = \left\{-\frac{11}{3}; -1\right\}$ $S\left(-\frac{7}{3} \;\middle|\; -\frac{3}{2}\right)$

25) $f(x) = 475x^2 + 2\,185x + 2\,508$ $\text{NST} = \left\{-\frac{12}{5}; -\frac{11}{5}\right\}$ $S\left(-\frac{23}{10} \;\middle|\; -\frac{19}{4}\right)$

26) $f(x) = \frac{5}{4}x^2 - \frac{15}{2}x + \frac{25}{4}$ $\text{NST} = \{1; 5\}$ $S\left(3 \mid -5\right)$

27) $f(x) = \frac{1}{4}x^2 - 1$ $\text{NST} = \{-2; 2\}$ $S\left(0 \mid -1\right)$

28) $f(x) = -\frac{162}{5}x^2 - \frac{468}{5}x - 66$ $\text{NST} = \left\{-\frac{5}{3}; -\frac{11}{9}\right\}$ $S\left(-\frac{13}{9} \;\middle|\; \frac{8}{5}\right)$

29) $f(x) = -\frac{27}{100}x^2 - \frac{9}{10}x + \frac{9}{4}$ $\text{NST} = \left\{-5; \frac{5}{3}\right\}$ $S\left(-\frac{5}{3} \;\middle|\; 3\right)$

30) $f(x) = \frac{432}{289}x^2 + \frac{936}{289}x - \frac{360}{289}$ $\text{NST} = \left\{-\frac{5}{2}; \frac{1}{3}\right\}$ $S\left(-\frac{13}{12} \;\middle|\; -3\right)$

31) $f(x) = \frac{36}{5}x^2 + \frac{228}{5}x + 72$ $\text{NST} = \left\{-\frac{10}{3}; -3\right\}$ $S\left(-\frac{19}{6} \;\middle|\; -\frac{1}{5}\right)$

32) $f(x) = -\frac{88}{169}x^2 + \frac{440}{507}x + \frac{352}{169}$ $\text{NST} = \left\{-\frac{4}{3}; 3\right\}$ $S\left(\frac{5}{6} \;\middle|\; \frac{22}{9}\right)$

33) $f(x) = -\frac{64}{49}x^2 - \frac{96}{49}x + \frac{160}{49}$ $\text{NST} = \left\{-\frac{5}{2}; 1\right\}$ $S\left(-\frac{3}{4} \;\middle|\; 4\right)$

34) $f(x) = \frac{432}{25}x^2 - \frac{72}{25}x - \frac{72}{25}$ $\text{NST} = \left\{-\frac{1}{3}; \frac{1}{2}\right\}$ $S\left(\frac{1}{12} \;\middle|\; -3\right)$

35) $f(x) = \frac{32}{13}x^2 - \frac{656}{39}x + \frac{336}{13}$ $\text{NST} = \left\{\frac{7}{3}; \frac{9}{2}\right\}$ $S\left(\frac{41}{12} \;\middle|\; -\frac{26}{9}\right)$

36) $f(x) = -\frac{879}{719}x^2 - \frac{331}{171}x + \frac{662}{361}$ $\text{NST} = \left\{-\frac{9}{4}; \frac{2}{3}\right\}$ $S\left(-\frac{19}{24} \;\middle|\; \frac{13}{5}\right)$

37) $f(x) = -\frac{324}{125}x^2 + \frac{396}{125}x + \frac{504}{125}$ $\text{NST} = \left\{-\frac{7}{9}; 2\right\}$ $S\left(\frac{11}{18} \;\middle|\; 5\right)$

38) $f(x) = \frac{25}{14}x^2 + \frac{60}{7}x + \frac{95}{14}$ $\text{NST} = \left\{-\frac{19}{5}; -1\right\}$ $S\left(-\frac{12}{5} \;\middle|\; -\frac{7}{2}\right)$

39) $f(x) = -\frac{135}{2}x^2 + 144x - 72$ $\text{NST} = \left\{\frac{4}{5}; \frac{4}{3}\right\}$ $S\left(\frac{16}{15} \;\middle|\; \frac{24}{5}\right)$

40) $f(x) = \frac{28}{27}x^2 + \frac{56}{27}x - \frac{35}{27}$ $\text{NST} = \left\{-\frac{5}{2}; \frac{1}{2}\right\}$ $S\left(-1 \;\middle|\; -\frac{7}{3}\right)$

41) $f(x) = -60x^2 + 280x - 325$ $\text{NST} = \left\{\frac{13}{6}; \frac{5}{2}\right\}$ $S\left(\frac{7}{3} \;\middle|\; \frac{5}{3}\right)$

42) $f(x) = \frac{9}{40}x^2 + \frac{3}{4}x + \frac{9}{40}$ $\text{NST} = \left\{-3; -\frac{1}{3}\right\}$ $S\left(-\frac{5}{3} \;\middle|\; -\frac{2}{5}\right)$

43) $f(x) = \frac{405}{4}x^2 + 450x + 495$ $\text{NST} = \left\{-\frac{22}{9}; -2\right\}$ $S\left(-\frac{20}{9} \;\middle|\; -5\right)$

44) $f(x) = \frac{9}{2}x^2 - 27x + 36$ $\text{NST} = \{2; 4\}$ $S\left(3 \;\middle|\; -\frac{9}{2}\right)$

45) $f(x) = \frac{792}{289}x^2 - \frac{88}{289}x - \frac{704}{289}$ $\text{NST} = \left\{-\frac{8}{9}; 1\right\}$ $S\left(\frac{1}{18} \;\middle|\; -\frac{22}{9}\right)$

46) $f(x) = 40x^2 - 60x + 20$ $\text{NST} = \left\{\frac{1}{2}; 1\right\}$ $S\left(\frac{3}{4} \;\middle|\; -\frac{5}{2}\right)$

47) $f(x) = \frac{72}{625}x^2 + \frac{156}{625}x - \frac{228}{625}$ $\text{NST} = \left\{-\frac{19}{6}; 1\right\}$ $S\left(-\frac{13}{12} \;\middle|\; -\frac{1}{2}\right)$

48) $f(x) = \frac{800}{121}x^2 - \frac{840}{121}x + \frac{160}{121}$ $\text{NST} = \left\{\frac{1}{4}; \frac{4}{5}\right\}$ $S\left(\frac{21}{40} \;\middle|\; -\frac{1}{2}\right)$

49) $f(x) = \frac{7}{6}x^2 - \frac{14}{3}$ $\text{NST} = \{-2; 2\}$ $S\left(0 \;\middle|\; -\frac{14}{3}\right)$

50) $f(x) = -\frac{3}{7}x^2 + \frac{10}{7}x + \frac{8}{7}$ $\text{NST} = \left\{-\frac{2}{3}; 4\right\}$ $S\left(\frac{5}{3} \;\middle|\; \frac{7}{3}\right)$

51) $f(x) = 28x^2 - \frac{224}{3}x + \frac{140}{3}$ $\text{NST} = \left\{1; \frac{5}{3}\right\}$ $S\left(\frac{4}{3} \;\middle|\; -\frac{28}{9}\right)$

52) $f(x) = \frac{900}{637}x^2 + \frac{690}{91}x + \frac{90}{13}$ $\text{NST} = \left\{-\frac{21}{5}; -\frac{7}{6}\right\}$ $S\left(-\frac{161}{60} \;\middle|\; -\frac{13}{4}\right)$

53) $f(x) = -240x^2 - 1\,640x - 2\,800$ $\text{NST} = \left\{-\frac{7}{2}; -\frac{10}{3}\right\}$ $S\left(-\frac{41}{12} \;\middle|\; \frac{5}{3}\right)$

54) $f(x) = \frac{81}{640}x^2 + \frac{9}{32}x - \frac{231}{160}$ $\text{NST} = \left\{-\frac{14}{3}; \frac{22}{9}\right\}$ $S\left(-\frac{10}{9} \;\middle|\; -\frac{8}{5}\right)$

55) $f(x) = \frac{99}{100}x^2 + \frac{121}{25}x + \frac{352}{75}$ $\text{NST} = \left\{-\frac{32}{9}; -\frac{4}{3}\right\}$ $S\left(-\frac{22}{9} \;\middle|\; -\frac{11}{9}\right)$

56) $f(x) = 171x^2 + 1\,064x + 1\,653$ $\text{NST} = \left\{-\frac{29}{9}; -3\right\}$ $S\left(-\frac{28}{9} \;\middle|\; -\frac{19}{9}\right)$

57) $f(x) = \frac{162}{529}x^2 - \frac{882}{529}x + \frac{936}{529}$ $\text{NST} = \left\{\frac{13}{9}; 4\right\}$ $S\left(\frac{49}{18} \;\middle|\; -\frac{1}{2}\right)$

58) $f(x) = -\frac{864}{169}x^2 + \frac{504}{13}x - 72$ $\text{NST} = \left\{\frac{13}{4}; \frac{13}{3}\right\}$ $S\left(\frac{91}{24} \;\middle|\; \frac{3}{2}\right)$

59) $f(x) = \frac{36}{25}x^2 + \frac{216}{25}x + \frac{224}{25}$ $\text{NST} = \left\{-\frac{14}{3}; -\frac{4}{3}\right\}$ $S\left(-3 \mid -4\right)$

60) $f(x) = -\frac{4}{9}x^2 + \frac{20}{9}x - \frac{16}{9}$ $\text{NST} = \{1; 4\}$ $S\left(\frac{5}{2} \;\middle|\; 1\right)$

61) $f(x) = -\frac{11}{18}x^2 + \frac{77}{27}x - \frac{143}{162}$ $\text{NST} = \left\{\frac{1}{3}; \frac{13}{3}\right\}$ $S\left(\frac{7}{3} \;\middle|\; \frac{22}{9}\right)$

62) $f(x) = \frac{250}{81}x^2 + \frac{100}{9}x + \frac{50}{9}$ NST $= \left\{-3; -\frac{3}{5}\right\}$ $S\left(-\frac{9}{5} \middle| -\frac{40}{9}\right)$

63) $f(x) = \frac{4}{49}x^2 + \frac{16}{147}x - \frac{20}{49}$ NST $= \left\{-3; \frac{5}{3}\right\}$ $S\left(-\frac{2}{3} \middle| -\frac{4}{9}\right)$

64) $f(x) = -\frac{54}{169}x^2 - \frac{102}{169}x + \frac{616}{507}$ NST $= \left\{-\frac{28}{9}; \frac{11}{9}\right\}$ $S\left(-\frac{17}{18} \middle| \frac{3}{2}\right)$

65) $f(x) = -\frac{2}{21}x^2 - \frac{10}{63}x + \frac{208}{189}$ NST $= \left\{-\frac{13}{3}; \frac{8}{3}\right\}$ $S\left(-\frac{5}{6} \middle| \frac{7}{6}\right)$

66) $f(x) = -\frac{297}{2}x^2 + 1\,023x - 1\,760$ NST $= \left\{\frac{10}{3}; \frac{32}{9}\right\}$ $S\left(\frac{31}{9} \middle| \frac{11}{6}\right)$

67) $f(x) = \frac{2}{7}x^2 - \frac{2}{7}x - \frac{24}{7}$ NST $= \{-3; 4\}$ $S\left(\frac{1}{2} \middle| -\frac{7}{2}\right)$

68) $f(x) = \frac{41}{100}x^2 - \frac{41}{150}x - \frac{451}{100}$ NST $= \left\{-3; \frac{11}{3}\right\}$ $S\left(\frac{1}{3} \middle| -\frac{41}{9}\right)$

69) $f(x) = -\frac{48}{169}x^2 + \frac{184}{169}x - \frac{120}{169}$ NST $= \left\{\frac{5}{6}; 3\right\}$ $S\left(\frac{23}{12} \middle| \frac{1}{3}\right)$

70) $f(x) = -\frac{36}{25}x^2 - \frac{192}{25}x - \frac{156}{25}$ NST $= \left\{-\frac{13}{3}; -1\right\}$ $S\left(-\frac{8}{3} \middle| 4\right)$

71) $f(x) = 20x^2 - \frac{260}{3}x + \frac{280}{3}$ NST $= \left\{2; \frac{7}{3}\right\}$ $S\left(\frac{13}{6} \middle| -\frac{5}{9}\right)$

72) $f(x) = 144x^2 - 72x + 8$ NST $= \left\{\frac{1}{6}; \frac{1}{3}\right\}$ $S\left(\frac{1}{4} \middle| -1\right)$

73) $f(x) = -\frac{81}{196}x^2 + \frac{36}{49}x + \frac{33}{49}$ NST $= \left\{-\frac{2}{3}; \frac{22}{9}\right\}$ $S\left(\frac{8}{9} \middle| 1\right)$

74) $f(x) = \frac{14}{5}x^2 + \frac{84}{5}x + \frac{112}{5}$ NST $= \{-4; -2\}$ $S\left(-3 \middle| -\frac{14}{5}\right)$

75) $f(x) = -60x^2 - 90x - 30$ NST $= \left\{-1; -\frac{1}{2}\right\}$ $S\left(-\frac{3}{4} \middle| \frac{15}{4}\right)$

76) $f(x) = -\frac{81}{49}x^2 + \frac{18}{49}x + \frac{48}{49}$ NST $= \left\{-\frac{2}{3}; \frac{8}{9}\right\}$ $S\left(\frac{1}{9} \middle| 1\right)$

77) $f(x) = -\frac{20}{63}x^2 - \frac{40}{63}x + \frac{25}{7}$ NST $= \left\{-\frac{9}{2}; \frac{5}{2}\right\}$ $S\left(-1 \middle| \frac{35}{9}\right)$

78) $f(x) = -\frac{3}{4}x^2 - 2x - 1$ NST $= \left\{-2; -\frac{2}{3}\right\}$ $S\left(-\frac{4}{3} \middle| \frac{1}{3}\right)$

79) $f(x) = \frac{144}{5}x^2 - \frac{912}{5}x + 288$ NST $= \left\{3; \frac{10}{3}\right\}$ $S\left(\frac{19}{6} \middle| -\frac{4}{5}\right)$

80) $f(x) = \frac{375}{98}x^2 - 25x + \frac{75}{2}$ NST $= \left\{\frac{7}{3}; \frac{21}{5}\right\}$ $S\left(\frac{49}{15} \middle| -\frac{10}{3}\right)$

81) $f(x) = 28x^2 + 182x + 294$ NST $= \left\{-\frac{7}{2}; -3\right\}$ $S\left(-\frac{13}{4} \middle| -\frac{7}{4}\right)$

82) $f(x) = \frac{425}{36}x^2 + \frac{170}{3}x + \frac{255}{4}$ NST $= \left\{-3; -\frac{9}{5}\right\}$ $S\left(-\frac{12}{5} \middle| -\frac{17}{4}\right)$

83) $f(x) = 72x^2 + 108x + 36$ NST $= \left\{-1; -\frac{1}{2}\right\}$ $S\left(-\frac{3}{4} \middle| -\frac{9}{2}\right)$

84) $f(x) = \frac{9}{49}x^2 + \frac{69}{49}x + \frac{120}{49}$ NST $= \left\{-5; -\frac{8}{3}\right\}$ $S\left(-\frac{23}{6} \middle| -\frac{1}{4}\right)$

85) $f(x) = \frac{1}{4}x^2 - 2x + \frac{15}{4}$ NST $= \{3; 5\}$ $S\left(4 \middle| -\frac{1}{4}\right)$

86) $f(x) = -\frac{16}{33}x^2 + \frac{40}{33}x + \frac{32}{11}$ NST $= \left\{-\frac{3}{2}; 4\right\}$ $S\left(\frac{5}{4} \middle| \frac{11}{3}\right)$

87) $f(x) = -\frac{176}{75}x^2 + \frac{968}{75}x - \frac{352}{25}$ NST $= \left\{\frac{3}{2}; 4\right\}$ $S\left(\frac{11}{4} \middle| \frac{11}{3}\right)$

88) $f(x) = -\frac{16}{121}x^2 - \frac{24}{121}x + \frac{112}{121}$ NST $= \left\{-\frac{7}{2}; 2\right\}$ $S\left(-\frac{3}{4} \middle| 1\right)$

89) $f(x) = -\frac{184}{147}x^2 - \frac{184}{147}x + \frac{345}{98}$ NST $= \left\{-\frac{9}{4}; \frac{5}{4}\right\}$ $S\left(-\frac{1}{2} \middle| \frac{23}{6}\right)$

90) $f(x) = -\frac{50}{169}x^2 + \frac{160}{169}x + \frac{210}{169}$ NST $= \left\{-1; \frac{21}{5}\right\}$ $S\left(\frac{8}{5} \middle| 2\right)$

91) $f(x) = -\frac{72}{289}x^2 + \frac{48}{289}x + \frac{570}{289}$ NST $= \left\{-\frac{5}{2}; \frac{19}{6}\right\}$ $S\left(\frac{1}{3} \middle| 2\right)$

92) $f(x) = -\frac{100}{81}x^2 - \frac{40}{81}x + \frac{320}{81}$ NST $= \left\{-2; \frac{8}{5}\right\}$ $S\left(-\frac{1}{5} \middle| 4\right)$

93) $f(x) = \frac{64}{75}x^2 + \frac{64}{15}x + 4$ NST $= \left\{-\frac{15}{4}; -\frac{5}{4}\right\}$ $S\left(-\frac{5}{2} \middle| -\frac{4}{3}\right)$

94) $f(x) = -\frac{20}{49}x^2 - \frac{100}{147}x + \frac{40}{147}$ NST $= \left\{-2; \frac{1}{3}\right\}$ $S\left(-\frac{5}{6} \middle| \frac{5}{9}\right)$

95) $f(x) = \frac{14}{9}x^2 - \frac{266}{27}x + \frac{980}{81}$ NST $= \left\{\frac{5}{3}; \frac{14}{3}\right\}$ $S\left(\frac{19}{6} \middle| -\frac{7}{2}\right)$

96) $f(x) = \frac{81}{256}x^2 + \frac{9}{128}x - \frac{63}{256}$ NST $= \left\{-1; \frac{7}{9}\right\}$ $S\left(-\frac{1}{9} \middle| -\frac{1}{4}\right)$

97) $f(x) = -\frac{81}{4}x^2 + 180x - 396$ NST $= \left\{4; \frac{44}{9}\right\}$ $S\left(\frac{40}{9} \middle| 4\right)$

98) $f(x) = -\frac{168}{169}x^2 - \frac{952}{169}x - \frac{560}{169}$ NST $= \left\{-5; -\frac{2}{3}\right\}$ $S\left(-\frac{17}{6} \middle| \frac{14}{3}\right)$

99) $f(x) = \frac{48}{169}x^2 + \frac{180}{169}x + \frac{42}{169}$ NST $= \left\{-\frac{7}{2}; -\frac{1}{4}\right\}$ $S\left(-\frac{15}{8} \middle| -\frac{3}{4}\right)$

100) $f(x) = \frac{54}{7}x^2 - \frac{156}{7}x + \frac{80}{7}$ NST $= \left\{\frac{2}{3}; \frac{20}{9}\right\}$ $S\left(\frac{13}{9} \middle| -\frac{14}{3}\right)$

101) $f(x) = -\frac{108}{5}x^2 + \frac{414}{5}x - \frac{378}{5}$ NST $= \left\{\frac{3}{2}; \frac{7}{3}\right\}$ $S\left(\frac{23}{12} \middle| \frac{15}{4}\right)$

102) $f(x) = -\frac{320}{169}x^2 + \frac{400}{169}x + \frac{720}{169}$ NST $= \left\{-1; \frac{9}{4}\right\}$ $S\left(\frac{5}{8} \middle| 5\right)$

103) $f(x) = -\frac{32}{961}x^2 + \frac{8}{961}x + \frac{480}{961}$ NST $= \left\{-\frac{15}{4}; 4\right\}$ $S\left(\frac{1}{8} \middle| \frac{1}{2}\right)$

104) $f(x) = \frac{27}{125}x^2 - \frac{18}{125}x - \frac{72}{125}$ NST $= \left\{-\frac{4}{3}; 2\right\}$ $S\left(\frac{1}{3} \middle| -\frac{3}{5}\right)$

105) $f(x) = -648x^2 + 3\,960x - 6\,048$ NST $= \left\{3; \frac{28}{9}\right\}$ $S\left(\frac{55}{18} \middle| 2\right)$

106) $f(x) = \frac{25}{288}x^2 - \frac{5}{48}x - \frac{15}{32}$ NST $= \left\{-\frac{9}{5}; 3\right\}$ $S\left(\frac{3}{5} \middle| -\frac{1}{2}\right)$

107) $f(x) = -48x^2 - 176x - 160$ NST $= \left\{-2; -\frac{5}{3}\right\}$ $S\left(-\frac{11}{6} \middle| \frac{4}{3}\right)$

108) $f(x) = \frac{68}{81}x^2 - \frac{68}{81}x - \frac{136}{81}$ NST $= \{-1; 2\}$ $S\left(\frac{1}{2} \middle| -\frac{17}{9}\right)$

109) $f(x) = -96x^2 + 272x - 192$ NST $= \left\{\frac{4}{3}; \frac{3}{2}\right\}$ $S\left(\frac{17}{12} \middle| \frac{2}{3}\right)$

110) $f(x) = 8\,505x^2 - 9\,828x + 2\,835$ NST $= \left\{\frac{5}{9}; \frac{3}{5}\right\}$ $S\left(\frac{26}{45} \middle| -\frac{21}{5}\right)$

111) $f(x) = \frac{108}{49}x^2 - \frac{72}{7}x + 9$ NST $= \left\{\frac{7}{6}; \frac{7}{2}\right\}$ $S\left(\frac{7}{3} \middle| -3\right)$

112) $f(x) = -\frac{25}{196}x^2 - \frac{15}{98}x + \frac{187}{196}$ NST $= \left\{-\frac{17}{5}; \frac{11}{5}\right\}$ $S\left(-\frac{3}{5} \middle| 1\right)$

113) $f(x) = \frac{24}{25}x^2 + \frac{64}{25}x - \frac{24}{25}$ NST $= \left\{-3; \frac{1}{3}\right\}$ $S\left(-\frac{4}{3} \middle| -\frac{8}{3}\right)$

114) $f(x) = -64x^2 + 352x - 480$ NST $= \left\{\frac{5}{2}; 3\right\}$ $S\left(\frac{11}{4} \middle| 4\right)$

115) $f(x) = -\frac{351}{128}x^2 + \frac{195}{32}x - \frac{39}{32}$ NST $= \left\{\frac{2}{9}; 2\right\}$ $S\left(\frac{10}{9} \middle| \frac{13}{6}\right)$

116) $f(x) = \frac{112}{27}x^2 + \frac{280}{9}x + 56$ NST $= \left\{-\frac{9}{2}; -3\right\}$ $S\left(-\frac{15}{4} \middle| -\frac{7}{3}\right)$

117) $f(x) = -\frac{81}{784}x^2 + \frac{99}{392}x + \frac{75}{784}$ NST $= \left\{-\frac{1}{3}; \frac{25}{9}\right\}$ $S\left(\frac{11}{9} \middle| \frac{1}{4}\right)$

118) $f(x) = \frac{125}{24}x^2 - \frac{175}{6}x + \frac{75}{2}$ NST $= \left\{2; \frac{18}{5}\right\}$ $S\left(\frac{14}{5} \middle| -\frac{10}{3}\right)$

119) $f(x) = 2\,025x^2 + 19\,620x + 47\,520$ NST $= \left\{-\frac{44}{9}; -\frac{24}{5}\right\}$ $S\left(-\frac{218}{45} \middle| -4\right)$

120) $f(x) = 4x^2 + \frac{68}{3}x + \frac{253}{9}$ NST $= \left\{-\frac{23}{6}; -\frac{11}{6}\right\}$ $S\left(-\frac{17}{6} \middle| -4\right)$

121) $f(x) = -\frac{25}{144}x^2 - \frac{5}{9}x + \frac{5}{9}$ NST $= \left\{-4; \frac{4}{5}\right\}$ $S\left(-\frac{8}{5} \middle| 1\right)$

122) $f(x) = -5\,508x^2 - 13\,158x - 7\,854$ NST $= \left\{-\frac{11}{9}; -\frac{7}{6}\right\}$ $S\left(-\frac{43}{36} \middle| \frac{17}{4}\right)$

123) $f(x) = 216x^2 + 1\,260x + 1\,836$ NST $= \left\{-3; -\frac{17}{6}\right\}$ $S\left(-\frac{35}{12} \middle| -\frac{3}{2}\right)$

124) $f(x) = -\frac{81}{980}x^2 + \frac{117}{490}x + \frac{27}{980}$ NST $= \left\{-\frac{1}{9}; 3\right\}$ $S\left(\frac{13}{9} \middle| \frac{1}{5}\right)$

125) $f(x) = 19x^2 + 76x + \frac{285}{4}$ $\text{NST} = \left\{-\frac{5}{2}; -\frac{3}{2}\right\}$ $S\left(-2 \,\middle|\, -\frac{19}{4}\right)$

126) $f(x) = -\frac{25}{13}x^2 - \frac{135}{13}x - \frac{140}{13}$ $\text{NST} = \left\{-4; -\frac{7}{5}\right\}$ $S\left(-\frac{27}{10} \,\middle|\, \frac{13}{4}\right)$

127) $f(x) = -\frac{11}{5}x^2 + \frac{11}{5}$ $\text{NST} = \{-1; 1\}$ $S\left(0 \,\middle|\, \frac{11}{5}\right)$

128) $f(x) = \frac{602}{825}x^2 + \frac{121}{182}x - \frac{708}{383}$ $\text{NST} = \left\{-\frac{19}{9}; \frac{6}{5}\right\}$ $S\left(-\frac{41}{90} \,\middle|\, -2\right)$

129) $f(x) = 4\,800x^2 + 1\,760x + 160$ $\text{NST} = \left\{-\frac{1}{5}; -\frac{1}{6}\right\}$ $S\left(-\frac{11}{60} \,\middle|\, -\frac{4}{3}\right)$

130) $f(x) = \frac{144}{5}x^2 + \frac{384}{5}x + 48$ $\text{NST} = \left\{-\frac{5}{3}; -1\right\}$ $S\left(-\frac{4}{3} \,\middle|\, -\frac{16}{5}\right)$

131) $f(x) = -\sqrt{\frac{440}{329}}x^2 + \sqrt{\frac{376}{539}}x + \sqrt{\frac{770}{423}}$ $\text{NST} = \left\{-\frac{7}{9}; \frac{3}{2}\right\}$ $S\left(\frac{13}{36} \,\middle|\, \frac{3}{2}\right)$

132) $f(x) = -\frac{27}{50}x^2 - \frac{72}{25}x - \frac{117}{50}$ $\text{NST} = \left\{-\frac{13}{3}; -1\right\}$ $S\left(-\frac{8}{3} \,\middle|\, \frac{3}{2}\right)$

133) $f(x) = \frac{12}{25}x^2 + \frac{92}{25}x + \frac{168}{25}$ $\text{NST} = \left\{-\frac{14}{3}; -3\right\}$ $S\left(-\frac{23}{6} \,\middle|\, -\frac{1}{3}\right)$

134) $f(x) = \frac{128}{315}x^2 + \frac{32}{105}x - \frac{96}{35}$ $\text{NST} = \left\{-3; \frac{9}{4}\right\}$ $S\left(-\frac{3}{8} \,\middle|\, -\frac{14}{5}\right)$

135) $f(x) = -\frac{75}{121}x^2 + \frac{130}{121}x + \frac{105}{121}$ $\text{NST} = \left\{-\frac{3}{5}; \frac{7}{3}\right\}$ $S\left(\frac{13}{15} \,\middle|\, \frac{4}{3}\right)$

136) $f(x) = \frac{96}{25}x^2 + 24x + 36$ $\text{NST} = \left\{-\frac{15}{4}; -\frac{5}{2}\right\}$ $S\left(-\frac{25}{8} \,\middle|\, -\frac{3}{2}\right)$

137) $f(x) = -\frac{11}{50}x^2 + \frac{22}{9}$ $\text{NST} = \left\{-\frac{10}{3}; \frac{10}{3}\right\}$ $S\left(0 \,\middle|\, \frac{22}{9}\right)$

138) $f(x) = -\frac{144}{289}x^2 - \frac{600}{289}x - \frac{336}{289}$ $\text{NST} = \left\{-\frac{7}{2}; -\frac{2}{3}\right\}$ $S\left(-\frac{25}{12} \,\middle|\, 1\right)$

139) $f(x) = \frac{96}{175}x^2 + \frac{16}{35}x - \frac{32}{7}$ $\text{NST} = \left\{-\frac{10}{3}; \frac{5}{2}\right\}$ $S\left(-\frac{5}{12} \,\middle|\, -\frac{14}{3}\right)$

140) $f(x) = \frac{81}{125}x^2 + \frac{486}{125}x + \frac{504}{125}$ $\text{NST} = \left\{-\frac{14}{3}; -\frac{4}{3}\right\}$ $S\left(-3 \,\middle|\, -\frac{9}{5}\right)$

141) $f(x) = -\frac{208}{405}x^2 + \frac{104}{81}x + \frac{728}{405}$ $\text{NST} = \left\{-1; \frac{7}{2}\right\}$ $S\left(\frac{5}{4} \,\middle|\, \frac{13}{5}\right)$

142) $f(x) = -\frac{92}{125}x^2 + \frac{276}{125}x + \frac{368}{125}$ $\text{NST} = \{-1; 4\}$ $S\left(\frac{3}{2} \,\middle|\, \frac{23}{5}\right)$

143) $f(x) = -\frac{27}{4}x^2 - 30x - 32$ $\text{NST} = \left\{-\frac{8}{3}; -\frac{16}{9}\right\}$ $S\left(-\frac{20}{9} \,\middle|\, \frac{4}{3}\right)$

144) $f(x) = -\frac{81}{256}x^2 + \frac{27}{32}x + \frac{55}{16}$ $\text{NST} = \left\{-\frac{20}{9}; \frac{44}{9}\right\}$ $S\left(\frac{4}{3} \,\middle|\, 4\right)$

145) $f(x) = -\frac{144}{169}x^2 + \frac{456}{169}x - \frac{192}{169}$ $\text{NST} = \left\{\frac{1}{2}; \frac{8}{3}\right\}$ $S\left(\frac{19}{12} \,\middle|\, 1\right)$

146) $f(x) = \frac{50}{289}x^2 - \frac{30}{289}x - \frac{140}{289}$ $\text{NST} = \left\{-\frac{7}{5}; 2\right\}$ $S\left(\frac{3}{10} \middle| -\frac{1}{2}\right)$

147) $f(x) = \frac{32}{135}x^2 + \frac{112}{135}x - \frac{64}{135}$ $\text{NST} = \left\{-4; \frac{1}{2}\right\}$ $S\left(-\frac{7}{4} \middle| -\frac{6}{5}\right)$

148) $f(x) = \frac{27}{50}x^2 - \frac{81}{25}x + \frac{84}{25}$ $\text{NST} = \left\{\frac{4}{3}; \frac{14}{3}\right\}$ $S\left(3 \middle| -\frac{3}{2}\right)$

149) $f(x) = \frac{17}{5}x^2 - \frac{68}{5}x + \frac{51}{5}$ $\text{NST} = \{1; 3\}$ $S\left(2 \middle| -\frac{17}{5}\right)$

150) $f(x) = -8x^2 + 68x - 140$ $\text{NST} = \left\{\frac{7}{2}; 5\right\}$ $S\left(\frac{17}{4} \middle| \frac{9}{2}\right)$

151) $f(x) = \frac{45}{841}x^2 + \frac{204}{841}x + \frac{63}{841}$ $\text{NST} = \left\{-\frac{21}{5}; -\frac{1}{3}\right\}$ $S\left(-\frac{34}{15} \middle| -\frac{1}{5}\right)$

152) $f(x) = -\frac{144}{125}x^2 - \frac{216}{25}x - \frac{72}{5}$ $\text{NST} = \left\{-5; -\frac{5}{2}\right\}$ $S\left(-\frac{15}{4} \middle| \frac{9}{5}\right)$

153) $f(x) = \frac{13}{150}x^2 - \frac{13}{6}$ $\text{NST} = \{-5; 5\}$ $S\left(0 \middle| -\frac{13}{6}\right)$

154) $f(x) = -\frac{112}{289}x^2 + \frac{504}{289}x - \sqrt{\frac{251}{179}}$ $\text{NST} = \left\{\frac{5}{6}; \frac{11}{3}\right\}$ $S\left(\frac{9}{4} \middle| \frac{7}{9}\right)$

155) $f(x) = \frac{90}{49}x^2 - \frac{30}{49}x - \frac{120}{49}$ $\text{NST} = \left\{-1; \frac{4}{3}\right\}$ $S\left(\frac{1}{6} \middle| -\frac{5}{2}\right)$

156) $f(x) = -16x^2 + 144x - 320$ $\text{NST} = \{4; 5\}$ $S\left(\frac{9}{2} \middle| 4\right)$

157) $f(x) = -\frac{32}{7}x^2 - \frac{88}{7}x - \frac{36}{7}$ $\text{NST} = \left\{-\frac{9}{4}; -\frac{1}{2}\right\}$ $S\left(-\frac{11}{8} \middle| \frac{7}{2}\right)$

158) $f(x) = -\frac{1}{3}x^2 + \frac{10}{27}x + \frac{299}{243}$ $\text{NST} = \left\{-\frac{13}{9}; \frac{23}{9}\right\}$ $S\left(\frac{5}{9} \middle| \frac{4}{3}\right)$

159) $f(x) = -\frac{27}{80}x^2 + \frac{63}{40}x - \frac{99}{80}$ $\text{NST} = \left\{1; \frac{11}{3}\right\}$ $S\left(\frac{7}{3} \middle| \frac{3}{5}\right)$

160) $f(x) = -\frac{25}{84}x^2 - \frac{10}{21}x + \frac{15}{7}$ $\text{NST} = \left\{-\frac{18}{5}; 2\right\}$ $S\left(-\frac{4}{5} \middle| \frac{7}{3}\right)$

161) $f(x) = -\frac{20}{81}x^2 - \frac{20}{81}x + \frac{400}{81}$ $\text{NST} = \{-5; 4\}$ $S\left(-\frac{1}{2} \middle| 5\right)$

162) $f(x) = \frac{64}{25}x^2 - \frac{208}{75}x + \frac{16}{25}$ $\text{NST} = \left\{\frac{1}{3}; \frac{3}{4}\right\}$ $S\left(\frac{13}{24} \middle| -\frac{1}{9}\right)$

163) $f(x) = -24\,300x^2 + 232\,740x - 557\,280$ $\text{NST} = \left\{\frac{43}{9}; \frac{24}{5}\right\}$ $S\left(\frac{431}{90} \middle| 3\right)$

164) $f(x) = -25x^2 - 140x - 195$ $\text{NST} = \left\{-3; -\frac{13}{5}\right\}$ $S\left(-\frac{14}{5} \middle| 1\right)$

165) $f(x) = -\frac{72}{5}x^2 + \frac{132}{5}x - \frac{48}{5}$ $\text{NST} = \left\{\frac{1}{2}; \frac{4}{3}\right\}$ $S\left(\frac{11}{12} \middle| \frac{5}{2}\right)$

166) $f(x) = \frac{88}{3}x^2 + \frac{836}{3}x + 660$ $\text{NST} = \left\{-5; -\frac{9}{2}\right\}$ $S\left(-\frac{19}{4} \middle| -\frac{11}{6}\right)$

167) $f(x) = \frac{48}{125}x^2 + \frac{184}{125}x - \frac{32}{125}$ NST $= \left\{-4; \frac{1}{6}\right\}$ $S\left(-\frac{23}{12} \middle| -\frac{5}{3}\right)$

168) $f(x) = \frac{7}{5}x^2 - 7x + \frac{147}{20}$ NST $= \left\{\frac{3}{2}; \frac{7}{2}\right\}$ $S\left(\frac{5}{2} \middle| -\frac{7}{5}\right)$

169) $f(x) = 405x^2 + 765x + 360$ NST $= \left\{-1; -\frac{8}{9}\right\}$ $S\left(-\frac{17}{18} \middle| -\frac{5}{4}\right)$

170) $f(x) = \frac{63}{2}x^2 - 84x + \frac{105}{2}$ NST $= \left\{1; \frac{5}{3}\right\}$ $S\left(\frac{4}{3} \middle| -\frac{7}{2}\right)$

171) $f(x) = \frac{16}{9}x^2 - 4$ NST $= \left\{-\frac{3}{2}; \frac{3}{2}\right\}$ $S\left(0 \mid -4\right)$

172) $f(x) = \frac{64}{45}x^2 + \frac{464}{45}x + \frac{152}{9}$ NST $= \left\{-\frac{19}{4}; -\frac{5}{2}\right\}$ $S\left(-\frac{29}{8} \middle| -\frac{9}{5}\right)$

173) $f(x) = -\frac{16}{81}x^2 - \frac{64}{81}x + \frac{80}{81}$ NST $= \{-5; 1\}$ $S\left(-2 \middle| \frac{16}{9}\right)$

174) $f(x) = -\frac{25}{338}x^2 + \frac{35}{169}x + \frac{60}{169}$ NST $= \left\{-\frac{6}{5}; 4\right\}$ $S\left(\frac{7}{5} \middle| \frac{1}{2}\right)$

175) $f(x) = -\frac{48}{11}x^2 - \frac{328}{11}x - \frac{520}{11}$ NST $= \left\{-\frac{13}{3}; -\frac{5}{2}\right\}$ $S\left(-\frac{41}{12} \middle| \frac{11}{3}\right)$

176) $f(x) = 768x^2 - 1\,088x + 384$ NST $= \left\{\frac{2}{3}; \frac{3}{4}\right\}$ $S\left(\frac{17}{24} \middle| -\frac{4}{3}\right)$

177) $f(x) = -\frac{351}{50}x^2 - \frac{78}{5}x - \frac{13}{2}$ NST $= \left\{-\frac{5}{3}; -\frac{5}{9}\right\}$ $S\left(-\frac{10}{9} \middle| \frac{13}{6}\right)$

178) $f(x) = \frac{200}{729}x^2 + \frac{40}{243}x - \frac{160}{81}$ NST $= \left\{-3; \frac{12}{5}\right\}$ $S\left(-\frac{3}{10} \middle| -2\right)$

179) $f(x) = -\frac{16}{45}x^2 - \frac{8}{9}x + \frac{56}{45}$ NST $= \left\{-\frac{7}{2}; 1\right\}$ $S\left(-\frac{5}{4} \middle| \frac{9}{5}\right)$

180) $f(x) = -\frac{29}{4}x^2 + \frac{145}{6}x - \frac{203}{12}$ NST $= \left\{1; \frac{7}{3}\right\}$ $S\left(\frac{5}{3} \middle| \frac{29}{9}\right)$

181) $f(x) = -\frac{48}{49}x^2 - \frac{184}{49}x - \frac{160}{49}$ NST $= \left\{-\frac{5}{2}; -\frac{4}{3}\right\}$ $S\left(-\frac{23}{12} \middle| \frac{1}{3}\right)$

182) $f(x) = -\frac{1}{36}x^2 + \frac{1}{27}x + \frac{35}{81}$ NST $= \left\{-\frac{10}{3}; \frac{14}{3}\right\}$ $S\left(\frac{2}{3} \middle| \frac{4}{9}\right)$

183) $f(x) = \frac{351}{242}x^2 - \frac{78}{11}x + \frac{13}{2}$ NST $= \left\{\frac{11}{9}; \frac{11}{3}\right\}$ $S\left(\frac{22}{9} \middle| -\frac{13}{6}\right)$

184) $f(x) = -\frac{136}{507}x^2 + \frac{340}{507}x + \frac{408}{169}$ NST $= \left\{-2; \frac{9}{2}\right\}$ $S\left(\frac{5}{4} \middle| \frac{17}{6}\right)$

185) $f(x) = \frac{99}{160}x^2 - \frac{33}{40}x - \frac{33}{8}$ NST $= \left\{-2; \frac{10}{3}\right\}$ $S\left(\frac{2}{3} \middle| -\frac{22}{5}\right)$

186) $f(x) = -\frac{96}{289}x^2 + \frac{992}{867}x + \sqrt{\frac{834}{295}}$ NST $= \left\{-\frac{10}{9}; \frac{41}{9}\right\}$ $S\left(\frac{31}{18} \middle| \frac{8}{3}\right)$

187) $f(x) = -\frac{36}{5}x^2 - \frac{212}{5}x - \frac{560}{9}$ NST $= \left\{-\frac{28}{9}; -\frac{25}{9}\right\}$ $S\left(-\frac{53}{18} \middle| \frac{1}{5}\right)$

188) $f(x) = \frac{25}{6}x^2 + \frac{25}{9}x - \frac{100}{27}$ NST $= \left\{-\frac{4}{3}; \frac{2}{3}\right\}$ $S\left(-\frac{1}{3} \middle| -\frac{25}{6}\right)$

189) $f(x) = -\frac{108}{961}x^2 + \frac{60}{961}x + \frac{312}{961}$ NST $= \left\{-\frac{13}{9}; 2\right\}$ $S\left(\frac{5}{18} \middle| \frac{1}{3}\right)$

190) $f(x) = -\sqrt{\frac{19}{6}}x^2 + \frac{205}{48}x + \frac{287}{144}$ NST $= \left\{-\frac{2}{5}; \frac{14}{5}\right\}$ $S\left(\frac{6}{5} \middle| \frac{41}{9}\right)$

191) $f(x) = \frac{55}{18}x^2 + \frac{154}{9}x + \frac{176}{9}$ NST $= \left\{-4; -\frac{8}{5}\right\}$ $S\left(-\frac{14}{5} \middle| -\frac{22}{5}\right)$

192) $f(x) = \frac{432}{289}x^2 - \frac{648}{289}x - \frac{624}{289}$ NST $= \left\{-\frac{2}{3}; \frac{13}{6}\right\}$ $S\left(\frac{3}{4} \middle| -3\right)$