

160 Funktionsgleichungen für Parabeln in verschiedenen Formen, Scheitelpunkt und Achsenschnittpunkte

| Nr. | $f(x) = a_2x^2 + a_1x + a_0$ | $f(x) = a_2(x - x_S)^2 + y_S$ | $S(x_S y_S)$ | $P_y(0 y_S)$ | $P_{x_1}(x_1 0)$ | $P_{x_2}(x_2 0)$ | Bemerkungen |
|-----|---------------------------------|---|--|----------------|----------------------|----------------------|--|
| 001 | $f(x) = x^2 + \frac{1}{2}x + 1$ | $f(x) = \left(x + \frac{1}{4}\right)^2 + \frac{15}{16}$ | $S\left(-\frac{1}{4} \frac{15}{16}\right)$ | $P_y(0 1)$ | | | keine Nullstellen |
| 002 | $f(x) = x^2 + x - 3$ | $f(x) = \left(x + \frac{1}{2}\right)^2 - \frac{13}{4}$ | $S\left(-\frac{1}{2} -\frac{13}{4}\right)$ | $P_y(0 -3)$ | $P_{x_1}(-2,30 0)$ | $P_{x_2}(1,30 0)$ | $P_{x_{1/2}}\left(-\frac{1}{2} \pm \sqrt{\frac{13}{4}} 0\right)$ |
| 003 | $f(x) = x^2 + x - 5$ | $f(x) = \left(x + \frac{1}{2}\right)^2 - \frac{21}{4}$ | $S\left(-\frac{1}{2} -\frac{21}{4}\right)$ | $P_y(0 -5)$ | $P_{x_1}(-2,79 0)$ | $P_{x_2}(1,79 0)$ | $P_{x_{1/2}}\left(-\frac{1}{2} \pm \sqrt{\frac{21}{4}} 0\right)$ |
| 004 | $f(x) = x^2 + 2x + 5$ | $f(x) = (x + 1)^2 - 4$ | $S(-1 -4)$ | $P_y(0 5)$ | | | keine Nullstellen |
| 005 | $f(x) = x^2 + 2x - 1$ | $f(x) = (x + 1)^2 - 2$ | $S(-1 -2)$ | $P_y(0 -1)$ | $P_{x_1}(-2,41 0)$ | $P_{x_2}(0,41 0)$ | $P_{x_{1/2}}(-1 \pm \sqrt{2} 0)$ |
| 006 | $f(x) = x^2 + 4x + 1$ | $f(x) = (x + 2)^2 - 3$ | $S(-2 -3)$ | $P_y(0 1)$ | $P_{x_1}(-3,73 0)$ | $P_{x_2}(-0,27 0)$ | $P_{x_{1/2}}(-2 \pm \sqrt{3} 0)$ |
| 007 | $f(x) = x^2 + 4x + 2$ | $f(x) = (x + 2)^2 - 2$ | $S(-2 -2)$ | $P_y(0 2)$ | $P_{x_1}(-3,41 0)$ | $P_{x_2}(-0,59 0)$ | $P_{x_{1/2}}(-2 \pm \sqrt{2} 0)$ |
| 008 | $f(x) = x^2 + 4x - 1$ | $f(x) = (x + 2)^2 - 5$ | $S(-2 -5)$ | $P_y(0 -1)$ | $P_{x_1}(-4,24 0)$ | $P_{x_2}(0,24 0)$ | $P_{x_{1/2}}(-2 \pm \sqrt{5} 0)$ |
| 009 | $f(x) = x^2 + 4x - 5$ | $f(x) = (x + 2)^2 - 9$ | $S(-2 -9)$ | $P_y(0 -5)$ | $P_{x_1}(-5 0)$ | $P_{x_2}(1 0)$ | |
| 010 | $f(x) = x^2 + 5x - 2$ | $f(x) = \left(x + \frac{5}{2}\right)^2 - \frac{33}{4}$ | $S\left(-\frac{5}{2} -\frac{33}{4}\right)$ | $P_y(0 -2)$ | $P_{x_1}(-5,37 0)$ | $P_{x_2}(0,37 0)$ | $P_{x_{1/2}}\left(-\frac{5}{2} \pm \sqrt{\frac{33}{4}} 0\right)$ |
| 011 | $f(x) = x^2 + 5x - 5$ | $f(x) = \left(x + \frac{5}{2}\right)^2 - \frac{45}{4}$ | $S\left(-\frac{5}{2} -\frac{45}{4}\right)$ | $P_y(0 -5)$ | $P_{x_1}(-5,85 0)$ | $P_{x_2}(0,85 0)$ | $P_{x_{1/2}}\left(-\frac{5}{2} \pm \sqrt{\frac{45}{4}} 0\right)$ |
| 012 | $f(x) = x^2 + 6x + 4$ | $f(x) = (x + 3)^2 - 5$ | $S(-3 -5)$ | $P_y(0 4)$ | $P_{x_1}(-5,24 0)$ | $P_{x_2}(-0,76 0)$ | $P_{x_{1/2}}(-3 \pm \sqrt{5} 0)$ |
| 013 | $f(x) = x^2 - 3x + 3,5$ | $f(x) = \left(x - \frac{3}{2}\right)^2 + \frac{5}{4}$ | $S\left(\frac{3}{2} \frac{5}{4}\right)$ | $P_y(0 3,5)$ | | | keine Nullstellen |
| 014 | $f(x) = x^2 - 4x + 1$ | $f(x) = (x - 2)^2 - 3$ | $S(2 -3)$ | $P_y(0 1)$ | $P_{x_1}(0,27 0)$ | $P_{x_2}(3,73 0)$ | $P_{x_{1/2}}(2 \pm \sqrt{3} 0)$ |
| 015 | $f(x) = x^2 - 4x + 2$ | $f(x) = (x - 2)^2 - 2$ | $S(2 -2)$ | $P_y(0 2)$ | $P_{x_1}(0,59 0)$ | $P_{x_2}(3,41 0)$ | $P_{x_{1/2}}(2 \pm \sqrt{2} 0)$ |

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|-----|----------------------------------|--|---|--------------|--------------------|-------------------|---|
| 016 | $f(x) = x^2 - 4x + 9$ | $f(x) = (x-2)^2 + 5$ | S(2 5) | $P_y(0 9)$ | | | keine Nullstellen |
| 017 | $f(x) = x^2 - 6x + 8$ | $f(x) = (x-3)^2 - 1$ | S(3 -1) | $P_y(0 8)$ | $P_{x_1}(2 0)$ | $P_{x_2}(4 0)$ | |
| 018 | $f(x) = -x^2 + \frac{1}{2}x - 2$ | $f(x) = -\left(x - \frac{1}{4}\right)^2 - \frac{31}{16}$ | $S\left(\frac{1}{4} \mid -\frac{31}{16}\right)$ | $P_y(0 -2)$ | | | keine Nullstellen |
| 019 | $f(x) = -x^2 + x + 6$ | $f(x) = -\left(x - \frac{1}{2}\right)^2 + \frac{25}{4}$ | $S\left(\frac{1}{2} \mid \frac{25}{4}\right)$ | $P_y(0 6)$ | $P_{x_1}(-2 0)$ | $P_{x_2}(3 0)$ | |
| 020 | $f(x) = -x^2 + 2x + 1$ | $f(x) = -(x-1)^2 + 2$ | S(1 2) | $P_y(0 1)$ | $P_{x_1}(-0,41 0)$ | $P_{x_1}(2,41 0)$ | $P_{x_{1/2}}(1 \pm \sqrt{2} 0)$ |
| 021 | $f(x) = -x^2 + 4x - 9$ | $f(x) = -(x-2)^2 - 5$ | S(2 -5) | $P_y(0 -9)$ | | | keine Nullstellen |
| 022 | $f(x) = -x^2 + 5x - 5$ | $f(x) = -\left(x - \frac{5}{2}\right)^2 + \frac{5}{4}$ | $S\left(\frac{5}{2} \mid \frac{5}{4}\right)$ | $P_y(0 -5)$ | $P_{x_1}(1,38 0)$ | $P_{x_1}(3,62 0)$ | $P_{x_{1/2}}\left(\frac{5}{2} \pm \sqrt{\frac{5}{4}} \mid 0\right)$ |
| 023 | $f(x) = -x^2 + 6x + 4$ | $f(x) = -(x-3)^2 + 13$ | S(3 13) | $P_y(0 4)$ | $P_{x_1}(-0,61 0)$ | $P_{x_1}(6,61 0)$ | $P_{x_{1/2}}(3 \pm \sqrt{13} 0)$ |
| 024 | $f(x) = -x^2 + 8x - 9$ | $f(x) = -(x-4)^2 + 7$ | S(4 7) | $P_y(0 -9)$ | $P_{x_1}(1,35 0)$ | $P_{x_1}(6,25 0)$ | $P_{x_{1/2}}(4 \pm \sqrt{7} 0)$ |
| 025 | $f(x) = -x^2 - x + 2,5$ | $f(x) = -\left(x + \frac{1}{2}\right)^2 + \frac{11}{4}$ | $S\left(-\frac{1}{2} \mid \frac{11}{4}\right)$ | $P_y(0 2,5)$ | $P_{x_1}(-1,16 0)$ | $P_{x_1}(2,16 0)$ | $P_{x_{1/2}}\left(\frac{1}{2} \pm \sqrt{\frac{11}{4}} \mid 0\right)$ |
| 026 | $f(x) = -x^2 - x + 6$ | $f(x) = -\left(x + \frac{1}{2}\right)^2 + \frac{25}{4}$ | $S\left(-\frac{1}{2} \mid \frac{25}{4}\right)$ | $P_y(0 6)$ | $P_{x_1}(-3 0)$ | $P_{x_2}(2 0)$ | |
| 027 | $f(x) = -x^2 - 2x + 1$ | $f(x) = -(x+1)^2 + 2$ | S(-1 2) | $P_y(0 1)$ | $P_{x_1}(-2,41 0)$ | $P_{x_1}(0,41 0)$ | $P_{x_{1/2}}(1 \pm \sqrt{2} 0)$ |
| 028 | $f(x) = -x^2 - 2x - 1$ | $f(x) = -(x+1)^2$ | S(-1 0) | $P_y(0 -1)$ | $P_{x_1}(-1 0)$ | $P_{x_2}(-1 0)$ | doppelte Nullstelle |
| 029 | $f(x) = -x^2 - 3x + 3,5$ | $f(x) = -\left(x + \frac{3}{2}\right)^2 + \frac{23}{4}$ | $S\left(-\frac{3}{2} \mid \frac{23}{4}\right)$ | $P_y(0 3,5)$ | $P_{x_1}(-3,90 0)$ | $P_{x_1}(0,90 0)$ | $P_{x_{1/2}}\left(-\frac{3}{2} \pm \sqrt{\frac{23}{4}} \mid 0\right)$ |
| 030 | $f(x) = -x^2 - 4x + 1$ | $f(x) = -(x+2)^2 + 5$ | S(-2 5) | $P_y(0 1)$ | $P_{x_1}(-4,24 0)$ | $P_{x_2}(0,24 0)$ | $P_{x_{1/2}}(-2 \pm \sqrt{5} 0)$ |
| 031 | $f(x) = -x^2 - 4x + 2$ | $f(x) = -(x+2)^2 + 6$ | S(-2 6) | $P_y(0 2)$ | $P_{x_1}(-4,45 0)$ | $P_{x_2}(0,45 0)$ | $P_{x_{1/2}}(-2 \pm \sqrt{6} 0)$ |
| 032 | $f(x) = -x^2 - 4x + 3$ | $f(x) = -(x+2)^2 + 7$ | S(-2 7) | $P_y(0 3)$ | $P_{x_1}(-4,65 0)$ | $P_{x_2}(0,65 0)$ | $P_{x_{1/2}}(-2 \pm \sqrt{7} 0)$ |

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|-----|------------------------|--|--|------------|--------------------|-------------------|-----------------------------------|
| 033 | $f(x) = -x^2 - 4x + 9$ | $f(x) = -(x+2)^2 + 13$ | $S(-2 13)$ | $P_y(0 9)$ | $P_{x_1}(-5,61 0)$ | $P_{x_1}(1,61 0)$ | $P_{x_{1/2}}(-2 \pm \sqrt{13} 0)$ |
| 034 | $f(x) = -x^2 - 6x + 8$ | $f(x) = -(x+3)^2 + 17$ | $S(-3 17)$ | $P_y(0 8)$ | $P_{x_1}(-7,12 0)$ | $P_{x_1}(1,12 0)$ | $P_{x_{1/2}}(-3 \pm \sqrt{17} 0)$ |
| 035 | $f(x) = x^2 + 9x$ | $f(x) = \left(x + \frac{9}{2}\right)^2 - \frac{81}{4}$ | $S\left(-\frac{9}{2} -\frac{81}{4}\right)$ | $P_y(0 0)$ | $P_{x_1}(-9 0)$ | $P_{x_2}(0 0)$ | |
| 036 | $f(x) = x^2 + x$ | $f(x) = \left(x + \frac{1}{2}\right)^2 - \frac{1}{4}$ | $S\left(-\frac{1}{2} -\frac{1}{4}\right)$ | $P_y(0 0)$ | $P_{x_1}(-1 0)$ | $P_{x_2}(0 0)$ | |
| 037 | $f(x) = x^2 + 2x$ | $f(x) = (x+1)^2 - 1$ | $S(-1 -1)$ | $P_y(0 0)$ | $P_{x_1}(-2 0)$ | $P_{x_2}(0 0)$ | |
| 038 | $f(x) = x^2 + 3x$ | $f(x) = \left(x + \frac{3}{2}\right)^2 - \frac{9}{4}$ | $S\left(-\frac{3}{2} -\frac{9}{4}\right)$ | $P_y(0 0)$ | $P_{x_1}(-3 0)$ | $P_{x_2}(0 0)$ | |
| 039 | $f(x) = x^2 + 4x$ | $f(x) = (x+2)^2 - 4$ | $S(-2 -4)$ | $P_y(0 0)$ | $P_{x_1}(-4 0)$ | $P_{x_2}(0 0)$ | |
| 040 | $f(x) = x^2 - 3x$ | $f(x) = \left(x + \frac{5}{2}\right)^2 - \frac{25}{4}$ | $S\left(-\frac{5}{2} -\frac{25}{4}\right)$ | $P_y(0 0)$ | $P_{x_1}(-5 0)$ | $P_{x_2}(0 0)$ | |
| 041 | $f(x) = x^2 + 6x$ | $f(x) = (x+3)^2 - 9$ | $S(-3 -9)$ | $P_y(0 0)$ | $P_{x_1}(-6 0)$ | $P_{x_2}(0 0)$ | |
| 042 | $f(x) = x^2 - x$ | $f(x) = \left(x - \frac{1}{2}\right)^2 - \frac{1}{4}$ | $S\left(\frac{1}{2} -\frac{1}{4}\right)$ | $P_y(0 0)$ | $P_{x_1}(0 0)$ | $P_{x_2}(1 0)$ | |
| 043 | $f(x) = x^2 - 2x$ | $f(x) = (x-1)^2 - 1$ | $S(1 -1)$ | $P_y(0 0)$ | $P_{x_1}(0 0)$ | $P_{x_2}(2 0)$ | |
| 044 | $f(x) = x^2 - 3x$ | $f(x) = \left(x - \frac{3}{2}\right)^2 - \frac{9}{4}$ | $S\left(\frac{3}{2} -\frac{9}{4}\right)$ | $P_y(0 0)$ | $P_{x_1}(0 0)$ | $P_{x_2}(3 0)$ | |
| 045 | $f(x) = x^2 - 4x$ | $f(x) = (x-2)^2 - 4$ | $S(2 -4)$ | $P_y(0 0)$ | $P_{x_1}(0 0)$ | $P_{x_2}(4 0)$ | |
| 046 | $f(x) = -x^2 + x$ | $f(x) = -\left(x - \frac{1}{2}\right)^2 + \frac{1}{4}$ | $S\left(\frac{1}{2} \frac{1}{4}\right)$ | $P_y(0 0)$ | $P_{x_1}(0 0)$ | $P_{x_2}(1 0)$ | |
| 047 | $f(x) = -x^2 + 2x$ | $f(x) = -(x-1)^2 + 1$ | $S(1 1)$ | $P_y(0 0)$ | $P_{x_1}(0 0)$ | $P_{x_2}(2 0)$ | |
| 048 | $f(x) = -x^2 + 3x$ | $f(x) = -\left(x - \frac{3}{2}\right)^2 + \frac{9}{4}$ | $S\left(\frac{3}{2} \frac{9}{4}\right)$ | $P_y(0 0)$ | $P_{x_1}(0 0)$ | $P_{x_2}(3 0)$ | |
| 049 | $f(x) = -x^2 + 4x$ | $f(x) = -(x-2)^2 + 4$ | $S(2 4)$ | $P_y(0 0)$ | $P_{x_1}(0 0)$ | $P_{x_2}(4 0)$ | |

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| 050 | $f(x) = -x^2 - x$ | $f(x) = -\left(x + \frac{1}{2}\right)^2 + \frac{1}{4}$ | $S\left(-\frac{1}{2} \mid \frac{1}{4}\right)$ | $P_y(0 \mid 0)$ | $P_{x_1}(-1 \mid 0)$ | $P_{x_2}(0 \mid 0)$ | |
| 051 | $f(x) = -x^2 - 2x$ | $f(x) = -(x+1)^2 + 1$ | $S(-1 \mid 1)$ | $P_y(0 \mid 0)$ | $P_{x_1}(-2 \mid 0)$ | $P_{x_2}(0 \mid 0)$ | |
| 052 | $f(x) = -x^2 - 3x$ | $f(x) = -\left(x + \frac{3}{2}\right)^2 + \frac{9}{4}$ | $S\left(-\frac{3}{2} \mid \frac{9}{4}\right)$ | $P_y(0 \mid 0)$ | $P_{x_1}(-3 \mid 0)$ | $P_{x_2}(0 \mid 0)$ | |
| 053 | $f(x) = x^2 - \frac{1}{9}$ | $f(x) = x^2 - \frac{1}{9}$ | $S\left(0 \mid -\frac{1}{9}\right)$ | $P_y\left(0 \mid -\frac{1}{9}\right)$ | $P_{x_1}\left(-\frac{1}{3} \mid 0\right)$ | $P_{x_2}\left(\frac{1}{3} \mid 0\right)$ | |
| 054 | $f(x) = x^2 - \frac{1}{4}$ | $f(x) = x^2 - \frac{1}{4}$ | $S\left(0 \mid -\frac{1}{4}\right)$ | $P_y\left(0 \mid -\frac{1}{4}\right)$ | $P_{x_1}\left(-\frac{1}{2} \mid 0\right)$ | $P_{x_2}\left(\frac{1}{2} \mid 0\right)$ | |
| 055 | $f(x) = x^2 - \frac{4}{9}$ | $f(x) = x^2 - \frac{4}{9}$ | $S\left(0 \mid -\frac{4}{9}\right)$ | $P_y\left(0 \mid -\frac{4}{9}\right)$ | $P_{x_1}\left(-\frac{2}{3} \mid 0\right)$ | $P_{x_2}\left(\frac{2}{3} \mid 0\right)$ | |
| 056 | $f(x) = x^2 - \frac{9}{4}$ | $f(x) = x^2 - \frac{9}{4}$ | $S\left(0 \mid -\frac{9}{4}\right)$ | $P_y\left(0 \mid -\frac{9}{4}\right)$ | $P_{x_1}\left(-\frac{3}{2} \mid 0\right)$ | $P_{x_2}\left(\frac{3}{2} \mid 0\right)$ | |
| 057 | $f(x) = x^2 - 1$ | $f(x) = x^2 - 1$ | $S(0 \mid -1)$ | $P_y(0 \mid -1)$ | $P_{x_1}(-1 \mid 0)$ | $P_{x_2}(1 \mid 0)$ | |
| 058 | $f(x) = x^2 - 2$ | $f(x) = x^2 - 2$ | $S(0 \mid -2)$ | $P_y(0 \mid -2)$ | $P_{x_1}(-1,41 \mid 0)$ | $P_{x_1}(1,41 \mid 0)$ | $P_{x_{1/2}}(\pm\sqrt{2} \mid 0)$ |
| 059 | $f(x) = x^2 - 3$ | $f(x) = x^2 - 3$ | $S(0 \mid -3)$ | $P_y(0 \mid -3)$ | $P_{x_1}(-1,73 \mid 0)$ | $P_{x_1}(1,73 \mid 0)$ | $P_{x_{1/2}}(\pm\sqrt{3} \mid 0)$ |
| 060 | $f(x) = x^2 - 4$ | $f(x) = x^2 - 4$ | $S(0 \mid -4)$ | $P_y(0 \mid -4)$ | $P_{x_1}(-2 \mid 0)$ | $P_{x_2}(2 \mid 0)$ | |
| 061 | $f(x) = x^2 - 9$ | $f(x) = x^2 - 9$ | $S(0 \mid -9)$ | $P_y(0 \mid -9)$ | $P_{x_1}(-3 \mid 0)$ | $P_{x_2}(3 \mid 0)$ | |
| 062 | $f(x) = -x^2 + 1$ | $f(x) = -x^2 + 1$ | $S(0 \mid 1)$ | $P_y(0 \mid 1)$ | $P_{x_1}(-1 \mid 0)$ | $P_{x_2}(1 \mid 0)$ | |
| 063 | $f(x) = -x^2 + 2$ | $f(x) = -x^2 + 2$ | $S(0 \mid 2)$ | $P_y(0 \mid 2)$ | $P_{x_1}(-1,41 \mid 0)$ | $P_{x_1}(1,41 \mid 0)$ | $P_{x_{1/2}}(\pm\sqrt{2} \mid 0)$ |
| 064 | $f(x) = -x^2 + \frac{9}{4}$ | $f(x) = -x^2 + \frac{9}{4}$ | $S\left(0 \mid \frac{9}{4}\right)$ | $P_y\left(0 \mid \frac{9}{4}\right)$ | $P_{x_1}\left(-\frac{3}{2} \mid 0\right)$ | $P_{x_2}\left(\frac{3}{2} \mid 0\right)$ | |
| 065 | $f(x) = -x^2 + 3$ | $f(x) = -x^2 + 3$ | $S(0 \mid 3)$ | $P_y(0 \mid 3)$ | $P_{x_1}(-1,73 \mid 0)$ | $P_{x_1}(1,73 \mid 0)$ | $P_{x_{1/2}}(\pm\sqrt{3} \mid 0)$ |
| 066 | $f(x) = -x^2 + 4$ | $f(x) = -x^2 + 4$ | $S(0 \mid 4)$ | $P_y(0 \mid 4)$ | $P_{x_1}(-2 \mid 0)$ | $P_{x_2}(2 \mid 0)$ | |
| 067 | $f(x) = -x^2 + 9$ | $f(x) = -x^2 + 9$ | $S(0 \mid 9)$ | $P_y(0 \mid 9)$ | $P_{x_1}(-3 \mid 0)$ | $P_{x_2}(3 \mid 0)$ | |
| 068 | $f(x) = x^2 + 2x - 2$ | $f(x) = (x+1)^2 - 3$ | $S(-1 \mid -3)$ | $P_y(0 \mid -2)$ | $P_{x_1}(-2,73 \mid 0)$ | $P_{x_1}(0,73 \mid 0)$ | $P_{x_{1/2}}(-1 \pm \sqrt{3} \mid 0)$ |

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| 069 | $f(x) = x^2 - 2x$ | $f(x) = (x-1)^2 - 1$ | S(1 -1) | $P_y(0 0)$ | $P_{x_1}(0 0)$ | $P_{x_2}(2 0)$ | |
| 070 | $f(x) = x^2 - 2x - 1$ | $f(x) = (x+1)^2 - 2$ | S(1 -2) | $P_y(0 -1)$ | $P_{x_1}(-2,41 0)$ | $P_{x_2}(0,41 0)$ | $P_{x_{1/2}}(-1 \pm \sqrt{2} 0)$ |
| 071 | $f(x) = x^2 - 4x + 3$ | $f(x) = (x-2)^2 - 1$ | S(2 -1) | $P_y(0 3)$ | $P_{x_1}(1 0)$ | $P_{x_2}(3 0)$ | |
| 072 | $f(x) = -x^2 - 2x - 1$ | $f(x) = -(x+1)^2$ | S(-1 0) | $P_y(0 -1)$ | $P_{x_1}(-1 0)$ | $P_{x_2}(-1 0)$ | doppelte Nullstelle |
| 073 | $f(x) = -x^2 - 4x - 4$ | $f(x) = -(x+2)^2$ | S(-2 0) | $P_y(0 -4)$ | $P_{x_1}(-2 0)$ | $P_{x_2}(-2 0)$ | doppelte Nullstelle |
| 074 | $f(x) = -x^2 - 2x - 1$ | $f(x) = -(x-1)^2$ | S(1 0) | $P_y(0 -1)$ | $P_{x_1}(1 0)$ | $P_{x_2}(1 0)$ | doppelte Nullstelle |
| 075 | $f(x) = -x^2 + 2x - 2$ | $f(x) = -(x-1)^2 - 1$ | S(1 -1) | $P_y(0 -2)$ | | | keine Nullstelle |
| 076 | $f(x) = \frac{1}{2}x^2 + 2x + 3$ | $f(x) = \frac{1}{2}(x+2)^2 + 1$ | S(-2 1) | $P_y(0 3)$ | | | keine Nullstelle |
| 077 | $f(x) = \frac{1}{2}x^2 - x - \frac{17}{2}$ | $f(x) = \frac{1}{2}(x-1)^2 - 9$ | S(1 -9) | $P_y\left(0\left -\frac{17}{2}\right.\right)$ | $P_{x_1}(-3,24 0)$ | $P_{x_2}(5,24 0)$ | $P_{x_{1/2}}(1 \pm \sqrt{18} 0)$ |
| 078 | $f(x) = \frac{1}{2}x^2 - 4x + 5$ | $f(x) = \frac{1}{2}(x-4)^2 - 3$ | S(4 -3) | $P_y(0 5)$ | $P_{x_1}(1,55 0)$ | $P_{x_2}(6,45 0)$ | $P_{x_{1/2}}(4 \pm \sqrt{6} 0)$ |
| 079 | $f(x) = -\frac{1}{2}x^2 - 2x + 6$ | $f(x) = -\frac{1}{2}(x+2)^2 + 8$ | S(-2 8) | $P_y(0 6)$ | $P_{x_1}(-6 0)$ | $P_{x_2}(2 0)$ | |
| 080 | $f(x) = -\frac{1}{3}x^2 + \frac{2}{3}x + \frac{5}{3}$ | $f(x) = -\frac{1}{3}(x-1)^2 + 2$ | S(1 2) | $P_y\left(0\left \frac{5}{3}\right.\right)$ | $P_{x_1}(-1,45 0)$ | $P_{x_2}(3,45 0)$ | $P_{x_{1/2}}(1 \pm \sqrt{6} 0)$ |
| 081 | $f(x) = -\frac{1}{9}x^2 + \frac{2}{9}x + \frac{8}{9}$ | $f(x) = -\frac{1}{9}(x-1)^2 + 1$ | S(1 1) | $P_y\left(0\left \frac{8}{9}\right.\right)$ | $P_{x_1}(-2 0)$ | $P_{x_2}(4 0)$ | |
| 082 | $f(x) = x^2 - 4x + 5$ | $f(x) = (x-2)^2 + 1$ | S(2 1) | $P_y(0 5)$ | | | keine Nullstelle |
| 083 | $f(x) = 2x^2 - 4x + 3$ | $f(x) = 2(x-1)^2 + 1$ | S(1 1) | $P_y(0 3)$ | | | keine Nullstelle |
| 084 | $f(x) = -x^2 - 4x - 7$ | $f(x) = -(x+2)^2 - 3$ | S(-2 -3) | $P_y(0 -7)$ | | | keine Nullstelle |
| 085 | $f(x) = -2x^2 + 8x - 11$ | $f(x) = -2(x-2)^2 - 3$ | S(2 -3) | $P_y(0 -11)$ | | | keine Nullstelle |
| 086 | $f(x) = -2x^2 + 10x - 14$ | $f(x) = -2\left(x - \frac{5}{2}\right)^2 - \frac{3}{2}$ | $S\left(\frac{5}{2}\left -\frac{3}{2}\right.\right)$ | $P_y(0 -14)$ | | | keine Nullstelle |

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| 087 | $f(x) = -4x^2 + 16x - 16$ | $f(x) = -4(x-2)^2$ | $S(2 0)$ | $P_y\left(0 \mid \frac{8}{9}\right)$ | $P_{x_1}(2 0)$ | $P_{x_2}(2 0)$ | doppelte Nullstelle |
| 088 | $f(x) = -4x^2 - 4x - \frac{1}{2}$ | $f(x) = -4\left(x + \frac{1}{2}\right)^2 + \frac{1}{2}$ | $S\left(-\frac{1}{2} \mid \frac{1}{2}\right)$ | $P_y\left(0 \mid -\frac{1}{2}\right)$ | $P_{x_1}(-0,85 0)$ | $P_{x_2}(-0,15 0)$ | $P_{x_{1/2}}\left(-\frac{1}{2} \pm \sqrt{\frac{1}{8}} \mid 0\right)$ |
| 089 | $f(x) = \frac{1}{2}x^2 - 6x$ | $f(x) = \frac{1}{2}(x-6)^2 - 18$ | $S(6 -18)$ | $P_y(0 0)$ | $P_{x_1}(0 0)$ | $P_{x_2}(12 0)$ | $f(x) = 0,5x(x-12)$ |
| 090 | $f(x) = \frac{1}{2}x^2 + \frac{1}{2}x - 6$ | $f(x) = \frac{1}{2}\left(x + \frac{1}{2}\right)^2 - \frac{49}{8}$ | $S\left(-\frac{1}{2} \mid -\frac{49}{8}\right)$ | $P_y(0 -6)$ | $P_{x_1}(-4 0)$ | $P_{x_2}(3 0)$ | $f(x) = 0,5(x-3)(x+4)$ |
| 091 | $f(x) = \frac{1}{2}x^2 - \frac{1}{2}x - 3$ | $f(x) = \frac{1}{2}\left(x - \frac{1}{2}\right)^2 - \frac{25}{8}$ | $S\left(\frac{1}{2} \mid -\frac{25}{8}\right)$ | $P_y(0 -3)$ | $P_{x_1}(-2 0)$ | $P_{x_2}(3 0)$ | $f(x) = 0,5(x-3)(x+2)$ |
| 092 | $f(x) = x^2 - x - 6$ | $f(x) = \left(x - \frac{1}{2}\right)^2 - \frac{25}{4}$ | $S\left(\frac{1}{2} \mid -\frac{25}{4}\right)$ | $P_y(0 -6)$ | $P_{x_1}(-2 0)$ | $P_{x_2}(3 0)$ | $f(x) = (x-3)(x+2)$ |
| 093 | $f(x) = x^2 - 3x + 2$ | $f(x) = \left(x - \frac{3}{2}\right)^2 - \frac{1}{4}$ | $S\left(\frac{3}{2} \mid -\frac{1}{4}\right)$ | $P_y(0 2)$ | $P_{x_1}(1 0)$ | $P_{x_2}(2 0)$ | $f(x) = (x-1)(x-2)$ |
| 094 | $f(x) = x^2 - x - 6$ | $f(x) = \left(x - \frac{1}{2}\right)^2 - \frac{25}{4}$ | $S\left(\frac{1}{2} \mid -\frac{25}{4}\right)$ | $P_y(0 -6)$ | $P_{x_1}(-2 0)$ | $P_{x_2}(3 0)$ | $f(x) = (x-3)(x+2)$ |
| 095 | $f(x) = 3x^2 - 3x$ | $f(x) = 3\left(x - \frac{1}{2}\right)^2 - \frac{3}{4}$ | $S\left(\frac{1}{2} \mid -\frac{3}{4}\right)$ | $P_y(0 0)$ | $P_{x_1}(0 0)$ | $P_{x_2}(1 0)$ | $f(x) = 3x(x-1)$ |
| 096 | $f(x) = -x^2 + 2x$ | $f(x) = -(x-1)^2 + 1$ | $S(1 1)$ | $P_y(0 0)$ | $P_{x_1}(0 0)$ | $P_{x_2}(2 0)$ | $f(x) = -x(x-2)$ |
| 097 | $f(x) = \frac{1}{2}x^2 - \frac{5}{2}$ | $f(x) = \frac{1}{2}x^2 - \frac{5}{2}$ | $S\left(0 \mid -\frac{5}{2}\right)$ | $P_y\left(0 \mid -\frac{5}{2}\right)$ | $P_{x_1}(-2,24 0)$ | $P_{x_2}(2,24 0)$ | $f(x) = 0,5(x^2 - 5)$ $\pm\sqrt{5}$ |
| 098 | $f(x) = \frac{1}{2}x^2 - \frac{17}{2}x$ | $f(x) = \frac{1}{2}\left(x - \frac{17}{2}\right)^2 - \frac{289}{8}$ | $S\left(\frac{17}{2} \mid -\frac{289}{8}\right)$ | $P_y(0 0)$ | $P_{x_1}(0 0)$ | $P_{x_2}(17 0)$ | |
| 099 | $f(x) = \frac{1}{2}x^2 + \frac{1}{4}x - 2$ | $f(x) = \frac{1}{2}\left(x + \frac{1}{4}\right)^2 - \frac{65}{32}$ | $S\left(-\frac{1}{4} \mid -\frac{65}{32}\right)$ | $P_y(0 -2)$ | $P_{x_1}(-2,27 0)$ | $P_{x_2}(1,77 0)$ | $P_{x_{1/2}}\left(-\frac{1}{4} \pm \sqrt{\frac{65}{16}} \mid 0\right)$ |
| 100 | $f(x) = \frac{1}{2}x^2 + x + 2$ | $f(x) = \frac{1}{2}(x+1)^2 + \frac{3}{2}$ | $S\left(-1 \mid \frac{3}{2}\right)$ | $P_y(0 2)$ | | | keine Nullstellen |

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|-----|---|--|---|-------------------------------------|-----------------------|---------------------|---|
| 101 | $f(x) = \frac{1}{2}x^2 + 2x - 10$ | $f(x) = \frac{1}{2}(x+2)^2 - 12$ | $S(-2 -12)$ | $P_y(0 -10)$ | $P_{x_1}(-6,90 0)$ | $P_{x_2}(2,90 0)$ | $P_{x_{1/2}}(-2 \pm \sqrt{24} 0)$ |
| 102 | $f(x) = \frac{1}{2}x^2 + \frac{5}{2}x - 6$ | $f(x) = \frac{1}{2}\left(x + \frac{5}{2}\right)^2 - \frac{73}{8}$ | $S\left(-\frac{5}{2} -\frac{73}{8}\right)$ | $P_y(0 -6)$ | $P_{x_1}(-6,77 0)$ | $P_{x_2}(1,77 0)$ | $P_{x_{1/2}}\left(-\frac{5}{2} \pm \sqrt{\frac{73}{4}} 0\right)$ |
| 103 | $f(x) = \frac{1}{2}x^2 + \frac{5}{2}x - 10$ | $f(x) = \frac{1}{2}\left(x + \frac{5}{2}\right)^2 - \frac{105}{8}$ | $S\left(-\frac{5}{2} -\frac{105}{8}\right)$ | $P_y(0 -10)$ | $P_{x_1}(-7,62 0)$ | $P_{x_2}(2,62 0)$ | $P_{x_{1/2}}\left(-\frac{5}{2} \pm \sqrt{\frac{105}{4}} 0\right)$ |
| 104 | $f(x) = \frac{1}{2}x^2 + 6x - 8$ | $f(x) = \frac{1}{2}(x+6)^2 - 26$ | $S(6 -26)$ | $P_y(0 -8)$ | $P_{x_1}(-13,21 0)$ | $P_{x_2}(1,21 0)$ | $P_{x_{1/2}}(-6 \pm \sqrt{52} 0)$ |
| 105 | $f(x) = \frac{1}{2}x^2 - 4x + 5$ | $f(x) = \frac{1}{2}(x-4)^2 - 3$ | $S(4 -3)$ | $P_y(0 5)$ | $P_{x_1}(1,55 0)$ | $P_{x_2}(6,45 0)$ | $P_{x_{1/2}}(4 \pm \sqrt{6} 0)$ |
| 106 | $f(x) = \frac{1}{2}x^2 - x - \frac{15}{2}$ | $f(x) = \frac{1}{2}(x-1)^2 - 8$ | $S(1 -8)$ | $P_y\left(0 -\frac{15}{2}\right)$ | $P_{x_1}(-3 0)$ | $P_{x_2}(5 0)$ | |
| 107 | $f(x) = \frac{1}{2}x^2 - 4x + \frac{15}{2}$ | $f(x) = \frac{1}{2}(x-4)^2 - \frac{1}{2}$ | $S\left(4 -\frac{1}{2}\right)$ | $P_y\left(0 \frac{15}{2}\right)$ | $P_{x_1}(3 0)$ | $P_{x_2}(5 0)$ | |
| 108 | $f(x) = -\frac{1}{2}x^2 - x$ | $f(x) = -\frac{1}{2}(x+1)^2 + \frac{1}{2}$ | $S\left(-1 \frac{1}{2}\right)$ | $P_y(0 0)$ | $P_{x_1}(-2 0)$ | $P_{x_2}(0 0)$ | |
| 109 | $f(x) = -\frac{1}{2}x^2 + 2x - 3$ | $f(x) = -\frac{1}{2}(x-2)^2 - 1$ | $S(2 -1)$ | $P_y(0 -3)$ | | | keine Nullstellen |
| 110 | $f(x) = -\frac{1}{2}x^2 - 2x + 6$ | $f(x) = -\frac{1}{2}(x+2)^2 + 8$ | $S(-2 8)$ | $P_y(0 6)$ | $P_{x_1}(-6 0)$ | $P_{x_2}(2 0)$ | |
| 111 | $f(x) = -\frac{1}{2}x^2 - 4x + 5$ | $f(x) = -\frac{1}{2}(x+4)^2 + 13$ | $S(-4 13)$ | $P_y(0 5)$ | $P_{x_1}(-9,01 0)$ | $P_{x_2}(1,01 0)$ | $P_{x_{1/2}}(-4 \pm \sqrt{26} 0)$ |
| 112 | $f(x) = \frac{1}{4}x^2 + 1$ | $f(x) = \frac{1}{4}x^2 + 1$ | $S(0 1)$ | $P_y(0 1)$ | | | keine Nullstellen |
| 113 | $f(x) = \frac{1}{4}x^2 + x - 1$ | $f(x) = \frac{1}{4}(x+2)^2 - 2$ | $S(-2 -2)$ | $P_y(0 -1)$ | $P_{x_1}(-4,83 0)$ | $P_{x_2}(0,83 0)$ | $P_{x_{1/2}}(-2 \pm \sqrt{8} 0)$ |
| 114 | $f(x) = \frac{1}{4}x^2 + 2x - 1$ | $f(x) = \frac{1}{4}(x+4)^2 - 5$ | $S(-4 -5)$ | $P_y(0 -1)$ | $P_{x_1}(-8,47 0)$ | $P_{x_2}(0,47 0)$ | $P_{x_{1/2}}(-4 \pm \sqrt{20} 0)$ |
| 115 | $f(x) = \frac{1}{4}x^2 + 3x - 5$ | $f(x) = \frac{1}{4}(x+6)^2 - 14$ | $S(-6 -14)$ | $P_y(0 -5)$ | $P_{x_1}(-13,48 0)$ | $P_{x_2}(1,48 0)$ | $P_{x_{1/2}}(-6 \pm \sqrt{56} 0)$ |

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| 116 | $f(x) = \frac{1}{4}x^2 + \frac{11}{2}x + 10$ | $f(x) = \frac{1}{4}(x+11)^2 - \frac{81}{4}$ | $S\left(-11 \mid -\frac{81}{4}\right)$ | $P_y(0 \mid 10)$ | $P_{x_1}(-20 \mid 0)$ | $P_{x_2}(-2 \mid 0)$ | |
| 117 | $f(x) = \frac{1}{4}x^2 - \frac{1}{2}x + 1$ | $f(x) = \frac{1}{4}(x-1)^2 + \frac{3}{4}$ | $S\left(1 \mid \frac{3}{4}\right)$ | $P_y(0 \mid 1)$ | | | keine Nullstellen |
| 118 | $f(x) = \frac{1}{4}x^2 - 3x + 8$ | $f(x) = \frac{1}{4}(x-6)^2 - 1$ | $S(6 \mid -1)$ | $P_y(0 \mid 8)$ | $P_{x_1}(4 \mid 0)$ | $P_{x_2}(8 \mid 0)$ | |
| 119 | $f(x) = \frac{1}{4}x^2 - 3x + 1$ | $f(x) = \frac{1}{4}(x-6)^2 - 8$ | $S(6 \mid -8)$ | $P_y(0 \mid 1)$ | $P_{x_1}(0,34 \mid 0)$ | $P_{x_2}(11,66 \mid 0)$ | $P_{x_{1/2}}(6 \pm \sqrt{32} \mid 0)$ |
| 120 | $f(x) = \frac{3}{4}x^2 + \frac{1}{4}x - 7$ | $f(x) = \frac{3}{4}\left(x + \frac{1}{6}\right)^2 - \frac{337}{48}$ | $S\left(-\frac{1}{6} \mid -\frac{337}{48}\right)$ | $P_y(0 \mid -7)$ | $P_{x_1}(-3,23 \mid 0)$ | $P_{x_2}(2,89 \mid 0)$ | $P_{x_{1/2}}\left(-\frac{1}{6} \pm \sqrt{\frac{337}{36}} \mid 0\right)$ |
| 121 | $f(x) = \frac{5}{4}x^2 + \frac{9}{4}x - \frac{1}{2}$ | $f(x) = \frac{5}{4}\left(x + \frac{9}{10}\right)^2 - \frac{121}{80}$ | $S\left(-\frac{9}{10} \mid -\frac{121}{80}\right)$ | $P_y\left(0 \mid -\frac{1}{2}\right)$ | $P_{x_1}(-2 \mid 0)$ | $P_{x_2}\left(\frac{1}{5} \mid 0\right)$ | |
| 122 | $f(x) = -\frac{1}{4}x^2 + \frac{1}{4}x - 1$ | $f(x) = -\frac{1}{4}\left(x - \frac{1}{2}\right)^2 - \frac{15}{16}$ | $S\left(\frac{1}{2} \mid -\frac{15}{16}\right)$ | $P_y(0 \mid -1)$ | | | keine Nullstellen |
| 123 | $f(x) = -\frac{1}{4}x^2 - 2x + 3$ | $f(x) = -\frac{1}{4}(x+4)^2 + 7$ | $S(-4 \mid 7)$ | $P_y(0 \mid 3)$ | $P_{x_1}(-9,29 \mid 0)$ | $P_{x_2}(1,29 \mid 0)$ | $P_{x_{1/2}}(-4 \pm \sqrt{28} \mid 0)$ |
| 124 | $f(x) = -\frac{3}{4}x^2 + \frac{2}{3}x - \frac{1}{6}$ | $f(x) = -\frac{3}{4}\left(x - \frac{4}{9}\right)^2 - \frac{1}{54}$ | $S\left(\frac{4}{9} \mid -\frac{1}{54}\right)$ | $P_y\left(0 \mid -\frac{1}{6}\right)$ | | | keine Nullstellen |
| 125 | $f(x) = -\frac{3}{4}x^2 + 2x + 3$ | $f(x) = -\frac{3}{4}\left(x - \frac{4}{3}\right)^2 + \frac{13}{3}$ | $S\left(\frac{4}{3} \mid \frac{13}{3}\right)$ | $P_y(0 \mid 3)$ | $P_{x_1}(-1,07 \mid 0)$ | $P_{x_2}(3,74 \mid 0)$ | $P_{x_{1/2}}\left(\frac{4}{3} \pm \sqrt{\frac{52}{9}} \mid 0\right)$ |
| 126 | $f(x) = \frac{1}{3}x^2 + \frac{2}{3}x - \sqrt{12}$ | $f(x) = \frac{1}{3}(x+1)^2 - \frac{1}{3} - \sqrt{12}$ | $S\left(-1 \mid -\frac{1}{3} - \sqrt{12}\right)$ | $P_y(0 \mid -\sqrt{12})$ | $P_{x_1}(-4,38 \mid 0)$ | $P_{x_2}(2,38 \mid 0)$ | $P_{x_{1/2}}(-1 \pm \sqrt{1+3\sqrt{12}} \mid 0)$ |
| 127 | $f(x) = \frac{1}{3}x^2 - \frac{2}{3}x - 2$ | $f(x) = \frac{1}{3}(x-1)^2 - \frac{7}{3}$ | $S\left(1 \mid -\frac{7}{3}\right)$ | $P_y(0 \mid -2)$ | $P_{x_1}(-1,65 \mid 0)$ | $P_{x_2}(3,65 \mid 0)$ | $P_{x_{1/2}}(1 \pm \sqrt{7} \mid 0)$ |
| 128 | $f(x) = \frac{1}{3}x^2 - 2x + \frac{5}{3}$ | $f(x) = \frac{1}{3}(x-3)^2 - \frac{4}{3}$ | $S\left(3 \mid -\frac{4}{3}\right)$ | $P_y\left(0 \mid \frac{5}{3}\right)$ | $P_{x_1}(1 \mid 0)$ | $P_{x_2}(5 \mid 0)$ | |
| 129 | $f(x) = \frac{1}{3}x^2 - \frac{2}{3}x + \frac{5}{6}$ | $f(x) = \frac{1}{3}(x-1)^2 + \frac{4}{3}$ | $S\left(1 \mid \frac{4}{3}\right)$ | $P_y\left(0 \mid \frac{5}{3}\right)$ | | | keine Nullstellen |

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|-----|---|--|--|---------------------------------------|-------------------------|--|--|
| 130 | $f(x) = -\frac{1}{3}x^2 + \frac{2}{3}x + 2$ | $f(x) = -\frac{1}{3}(x-1)^2 + \frac{7}{3}$ | $S\left(1 \mid \frac{7}{3}\right)$ | $P_y(0 \mid 2)$ | $P_{x_1}(-1,65 \mid 0)$ | $P_{x_2}(3,65 \mid 0)$ | $P_{x_{1/2}}(1 \pm \sqrt{7} \mid 0)$ |
| 131 | $f(x) = -\frac{1}{3}x^2 + 2x + \frac{5}{3}$ | $f(x) = -\frac{1}{3}(x-3)^2 + \frac{14}{3}$ | $S\left(3 \mid \frac{14}{3}\right)$ | $P_y\left(0 \mid \frac{5}{3}\right)$ | $P_{x_1}(-0,74 \mid 0)$ | $P_{x_2}(6,74 \mid 0)$ | $P_{x_{1/2}}(3 \pm \sqrt{14} \mid 0)$ |
| 132 | $f(x) = \frac{2}{3}x^2 + 4x$ | $f(x) = \frac{2}{3}(x+3)^2 - 6$ | $S(-3 \mid -6)$ | $P_y(0 \mid 0)$ | $P_{x_1}(-6 \mid 0)$ | $P_{x_2}(0 \mid 0)$ | |
| 133 | $f(x) = \frac{2}{3}x^2 - 2x + \frac{5}{2}$ | $f(x) = \frac{2}{3}\left(x - \frac{3}{2}\right)^2 + \frac{1}{6}$ | $S\left(\frac{3}{2} \mid \frac{1}{6}\right)$ | $P_y\left(0 \mid \frac{5}{3}\right)$ | | | keine Nullstellen |
| 134 | $f(x) = \frac{4}{3}x^2 - 2x + \frac{5}{2}$ | $f(x) = \frac{4}{3}\left(x - \frac{3}{4}\right)^2 + \frac{11}{12}$ | $S\left(\frac{3}{4} \mid \frac{11}{12}\right)$ | $P_y\left(0 \mid \frac{5}{3}\right)$ | | | keine Nullstellen |
| 135 | $f(x) = -\frac{2}{3}x^2 + \frac{3}{4}x + 6$ | $f(x) = -\frac{2}{3}\left(x - \frac{9}{16}\right)^2 + \frac{795}{128}$ | $S\left(\frac{9}{16} \mid \frac{795}{128}\right)$ | $P_y(0 \mid 6)$ | $P_{x_1}(-2,49 \mid 0)$ | $P_{x_2}(3,62 \mid 0)$ | $P_{x_{1/2}}\left(\frac{9}{16} \pm \sqrt{\frac{2385}{256}} \mid 0\right)$ |
| 136 | $f(x) = \frac{1}{5}x^2 + \frac{3}{5}x - \frac{7}{5}$ | $f(x) = \frac{1}{5}\left(x + \frac{3}{2}\right)^2 - \frac{37}{20}$ | $S\left(-\frac{3}{2} \mid -\frac{37}{20}\right)$ | $P_y\left(0 \mid -\frac{7}{5}\right)$ | $P_{x_1}(-4,54 \mid 0)$ | $P_{x_2}(1,54 \mid 0)$ | $P_{x_{1/2}}\left(-\frac{3}{2} \pm \sqrt{\frac{37}{4}} \mid 0\right)$ |
| 137 | $f(x) = \frac{2}{5}x^2 - \frac{3}{5}x - \frac{4}{5}$ | $f(x) = \frac{2}{5}\left(x - \frac{3}{4}\right)^2 - \frac{41}{40}$ | $S\left(\frac{3}{4} \mid -\frac{41}{40}\right)$ | $P_y\left(0 \mid -\frac{4}{5}\right)$ | $P_{x_1}(-0,85 \mid 0)$ | $P_{x_2}(2,35 \mid 0)$ | $P_{x_{1/2}}\left(\frac{3}{4} \pm \sqrt{\frac{41}{16}} \mid 0\right)$ |
| 138 | $f(x) = \frac{4}{5}x^2 + \frac{3}{4}x - \frac{7}{2}$ | $f(x) = \frac{4}{5}\left(x + \frac{15}{32}\right)^2 - \frac{941}{256}$ | $S\left(-\frac{15}{32} \mid -\frac{941}{256}\right)$ | $P_y\left(0 \mid -\frac{7}{2}\right)$ | $P_{x_1}(-2,61 \mid 0)$ | $P_{x_2}(1,67 \mid 0)$ | $P_{x_{1/2}}\left(-\frac{15}{32} \pm \sqrt{\frac{4705}{1024}} \mid 0\right)$ |
| 139 | $f(x) = -\frac{4}{5}x^2 + \frac{3}{5}x + \frac{7}{5}$ | $f(x) = -\frac{4}{5}\left(x - \frac{3}{8}\right)^2 + \frac{121}{80}$ | $S\left(\frac{3}{8} \mid \frac{121}{80}\right)$ | $P_y\left(0 \mid \frac{7}{5}\right)$ | $P_{x_1}(-1 \mid 0)$ | $P_{x_2}\left(\frac{7}{4} \mid 0\right)$ | |
| 140 | $f(x) = 2x^2 + 4x$ | $f(x) = 2(x+1)^2 - 2$ | $S(-1 \mid -2)$ | $P_y(0 \mid 0)$ | $P_{x_1}(-2 \mid 0)$ | $P_{x_2}(0 \mid 0)$ | |
| 141 | $f(x) = 2x^2 - x$ | $f(x) = 2\left(x - \frac{1}{4}\right)^2 - \frac{1}{8}$ | $S\left(\frac{1}{4} \mid -\frac{1}{8}\right)$ | $P_y(0 \mid 0)$ | $P_{x_1}(0 \mid 0)$ | $P_{x_2}\left(\frac{1}{2} \mid 0\right)$ | |
| 142 | $f(x) = 2x^2 + 3x - 1$ | $f(x) = 2\left(x + \frac{3}{4}\right)^2 - \frac{17}{8}$ | $S\left(-\frac{3}{4} \mid -\frac{17}{8}\right)$ | $P_y(0 \mid -1)$ | $P_{x_1}(-1,78 \mid 0)$ | $P_{x_2}(0,28 \mid 0)$ | $P_{x_{1/2}}\left(-\frac{3}{4} \pm \sqrt{\frac{17}{16}} \mid 0\right)$ |
| 143 | $f(x) = 2x^2 + 4x - 9$ | $f(x) = 2(x+1)^2 - 11$ | $S(-1 \mid -11)$ | $P_y(0 \mid -9)$ | $P_{x_1}(-3,35 \mid 0)$ | $P_{x_2}(1,35 \mid 0)$ | $P_{x_{1/2}}\left(-1 \pm \sqrt{\frac{11}{2}} \mid 0\right)$ |

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|-----|-------------------------|--|---|-------------|--------------------------------------|-------------------------------------|---|
| 144 | $f(x) = 2x^2 - 4x - 1$ | $f(x) = 2(x-1)^2 - 3$ | $S(1 -3)$ | $P_y(0 -1)$ | $P_{x_1}(-0,23 0)$ | $P_{x_2}(2,23 0)$ | $P_{x_{1/2}}\left(1 \pm \sqrt{\frac{3}{2}} 0\right)$ |
| 145 | $f(x) = 3x^2 - 1$ | $f(x) = 3x^2 - 1$ | $S(0 -1)$ | $P_y(0 -1)$ | $P_{x_1}(-0,58 0)$ | $P_{x_2}(0,58 0)$ | $P_{x_{1/2}}\left(\pm \sqrt{\frac{1}{3}} 0\right)$ |
| 146 | $f(x) = 3x^2 - 14x + 7$ | $f(x) = 3\left(x - \frac{7}{3}\right)^2 - \frac{28}{3}$ | $S\left(\frac{7}{3} -\frac{28}{3}\right)$ | $P_y(0 7)$ | $P_{x_1}(-0,57 0)$ | $P_{x_2}(4,1 0)$ | $P_{x_{1/2}}\left(\frac{7}{3} \pm \sqrt{\frac{28}{9}} 0\right)$ |
| 147 | $f(x) = 3x^2 - 2x + 1$ | $f(x) = 3\left(x - \frac{1}{3}\right)^2 + \frac{2}{3}$ | $S\left(\frac{1}{3} \frac{2}{3}\right)$ | $P_y(0 1)$ | | | keine Nullstelle |
| 148 | $f(x) = 4x^2 + x - 5$ | $f(x) = 4\left(x + \frac{1}{8}\right)^2 - \frac{81}{16}$ | $S\left(-\frac{1}{8} -\frac{81}{16}\right)$ | $P_y(0 -5)$ | $P_{x_1}\left(-\frac{5}{4} 0\right)$ | $P_{x_2}(1 0)$ | |
| 149 | $f(x) = 5x^2 + 2x$ | $f(x) = 5\left(x + \frac{1}{5}\right)^2 - \frac{1}{5}$ | $S\left(-\frac{1}{5} -\frac{1}{5}\right)$ | $P_y(0 0)$ | $P_{x_1}\left(-\frac{2}{5} 0\right)$ | $P_{x_2}(0 0)$ | |
| 150 | $f(x) = -2x^2 + 4x$ | $f(x) = -2(x-1)^2 + 2$ | $S(1 2)$ | $P_y(0 0)$ | $P_{x_1}(0 0)$ | $P_{x_2}(2 0)$ | |
| 151 | $f(x) = -2x^2 + x$ | $f(x) = -2\left(x - \frac{1}{4}\right)^2 + \frac{1}{8}$ | $S\left(\frac{1}{4} \frac{1}{8}\right)$ | $P_y(0 0)$ | $P_{x_1}(0 0)$ | $P_{x_2}\left(\frac{1}{2} 0\right)$ | |
| 152 | $f(x) = -2x^2 - 3x + 1$ | $f(x) = -2\left(x + \frac{3}{4}\right)^2 + \frac{17}{8}$ | $S\left(-\frac{3}{4} \frac{17}{8}\right)$ | $P_y(0 1)$ | $P_{x_1}(-1,79 0)$ | $P_{x_2}(0,28 0)$ | $P_{x_{1/2}}\left(-\frac{3}{4} \pm \sqrt{\frac{17}{16}} 0\right)$ |
| 153 | $f(x) = -2x^2 - 5x + 2$ | $f(x) = -2\left(x + \frac{5}{4}\right)^2 + \frac{41}{8}$ | $S\left(-\frac{5}{4} \frac{41}{8}\right)$ | $P_y(0 2)$ | $P_{x_1}(-2,85 0)$ | $P_{x_2}(0,35 0)$ | $P_{x_{1/2}}\left(-\frac{5}{4} \pm \sqrt{\frac{41}{16}} 0\right)$ |
| 154 | $f(x) = -2x^2 - 4x + 9$ | $f(x) = -2(x+1)^2 + 11$ | $S(-1 11)$ | $P_y(0 9)$ | $P_{x_1}(-3,35 0)$ | $P_{x_2}(1,35 0)$ | $P_{x_{1/2}}\left(-1 \pm \sqrt{\frac{11}{2}} 0\right)$ |
| 155 | $f(x) = -2x^2 - 4x + 1$ | $f(x) = -2(x+1)^2 + 3$ | $S(-1 3)$ | $P_y(0 1)$ | $P_{x_1}(-2,23 0)$ | $P_{x_2}(0,23 0)$ | $P_{x_{1/2}}\left(-1 \pm \sqrt{\frac{3}{2}} 0\right)$ |
| 156 | $f(x) = -3x^2 + 1$ | $f(x) = -3x^2 + 1$ | $S(0 1)$ | $P_y(0 1)$ | $P_{x_1}(-0,58 0)$ | $P_{x_2}(0,58 0)$ | $P_{x_{1/2}}\left(\pm \sqrt{\frac{1}{3}} 0\right)$ |

| | | | | | | | |
|-----|--------------------------|---|---|------------------|---|--|--|
| 157 | $f(x) = -3x^2 + 14x - 7$ | $f(x) = -3\left(x - \frac{7}{3}\right)^2 + \frac{28}{3}$ | $S\left(\frac{7}{3} \mid \frac{28}{3}\right)$ | $P_y(0 \mid -7)$ | $P_{x_1}(0,57 \mid 0)$ | $P_{x_2}(4,10 \mid 0)$ | $P_{x_{1/2}}\left(\frac{7}{3} \pm \sqrt{\frac{28}{9}} \mid 0\right)$ |
| 158 | $f(x) = -4x^2 + 9$ | $f(x) = -4x^2 + 9$ | $S(0 \mid 9)$ | $P_y(0 \mid 9)$ | $P_{x_1}\left(-\frac{3}{2} \mid 0\right)$ | $P_{x_2}\left(\frac{3}{2} \mid 0\right)$ | |
| 159 | $f(x) = -4x^2 - x + 5$ | $f(x) = -4\left(x + \frac{1}{8}\right)^2 + \frac{81}{16}$ | $S\left(-\frac{1}{8} \mid \frac{81}{16}\right)$ | $P_y(0 \mid 5)$ | $P_{x_1}\left(-\frac{5}{4} \mid 0\right)$ | $P_{x_2}(1 \mid 0)$ | |
| 160 | $f(x) = -4x^2 + x + 3$ | $f(x) = -4\left(x - \frac{1}{8}\right)^2 + \frac{49}{16}$ | $S\left(\frac{1}{8} \mid \frac{49}{16}\right)$ | $P_y(0 \mid 3)$ | $P_{x_1}\left(-\frac{3}{4} \mid 0\right)$ | $P_{x_2}(1 \mid 0)$ | |

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