

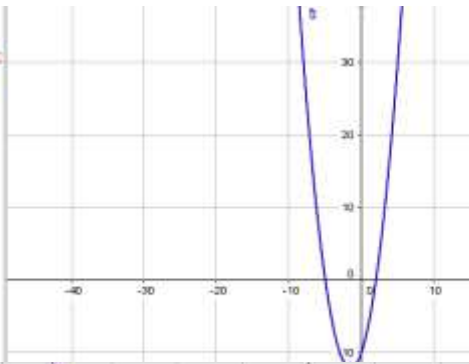
Überprüfe ob es sich um dieselbe Funktion handelt:

| Normalform | Scheitelpunktform | Faktorierte Form | alle Formeln gleich |
|--------------------------------|-----------------------------------|-------------------------|----------------------------|
| $y = x^2 + 3x - 10$ | $y = (x + 1,5)^2 - 12,25$ | $y = (x + 5)(x - 2)$ | |
| $y = -2x^2 - 20x + 58$ | $y = -2(x + 5)^2 - 8$ | $y = -2(x + 10)(x - 9)$ | |
| $y = x^2 + 4x - 5$ | $y = (x + 2)^2 - 9$ | $y = (x - 1)(x + 5)$ | |
| $y = x^2 + 7x + 10$ | $y = (x + 3,5)^2 + 2,25$ | $y = (x + 5)(x + 2)$ | |
| $y = \frac{1}{2}x^2 - 4x + 11$ | $y = \frac{1}{2}(x - 4)^2 + 3$ | $y = 0,5(x + 2)(x + 3)$ | |
| $y = 2x^2 + 12x + 16$ | $y = 2(x + 3)^2 - 2$ | $y = 2(x - 3)(x - 4)$ | |
| $y = x^2 - 7x + 12$ | $y = (x - 3,5)^2 - \frac{1}{2}$ | $y = (x - 3)(x - 4)$ | |
| $y = 2x^2 - 2x - 4$ | $y = 2(x - 0,5)^2 - \frac{9}{2}$ | $y = 2(x - 2)(x + 1)$ | |
| $y = 3x^2 - 3x - 6$ | $y = 3(x - \frac{1}{2})^2 - 6,75$ | $y = 3(x + 1)(x - 2)$ | |

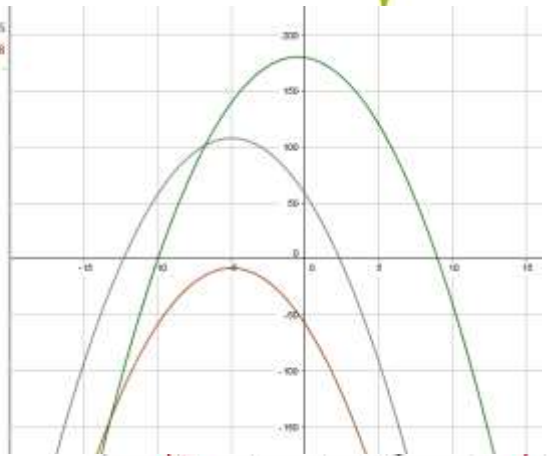
Lösung:

| Normalform | Scheitelpunktform | Faktorierte Form | alle Formeln gleich |
|--------------------------------|-----------------------------------|-------------------------|----------------------------|
| $y = x^2 + 3x - 10$ | $y = (x + 1,5)^2 - 12,25$ | $y = (x + 5)(x - 2)$ | ja |
| $y = -2x^2 - 20x + 58$ | $y = -2(x + 5)^2 - 8$ | $y = -2(x + 10)(x - 9)$ | nein |
| $y = x^2 + 4x - 5$ | $y = (x + 2)^2 - 9$ | $y = (x - 1)(x + 5)$ | ja |
| $y = x^2 + 7x + 10$ | $y = (x + 3,5)^2 - 2,25$ | $y = (x + 5)(x + 2)$ | ja |
| $y = \frac{1}{2}x^2 - 4x + 11$ | $y = \frac{1}{2}(x - 4)^2 + 3$ | $y = 0,5(x + 2)(x + 3)$ | nein |
| $y = 2x^2 + 12x + 16$ | $y = 2(x + 3)^2 - 2$ | $y = 2(x - 3)(x - 4)$ | nein |
| $y = x^2 - 7x + 12$ | $y = (x - 3,5)^2 - \frac{1}{2}$ | $y = (x - 3)(x - 4)$ | ja |
| $y = 2x^2 - 2x - 4$ | $y = 2(x - 0,5)^2 - \frac{9}{2}$ | $y = 2(x - 2)(x + 1)$ | ja |
| $y = 3x^2 - 3x - 6$ | $y = 3(x - \frac{1}{2})^2 - 6,75$ | $y = 3(x + 1)(x - 2)$ | ja |

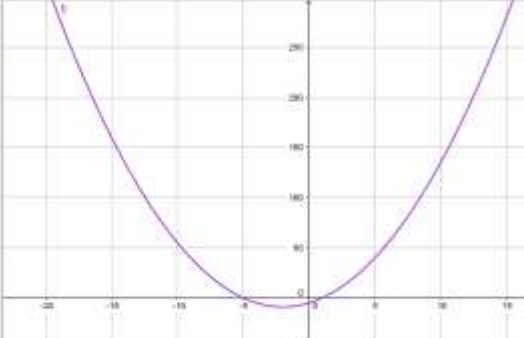
- Funktion
- $f(x) = x^2 + 3x - 10$
 - $g(x) = (x + 1.5)^2 - 12.25$
 - $h(x) = (x + 5)(x - 2)$



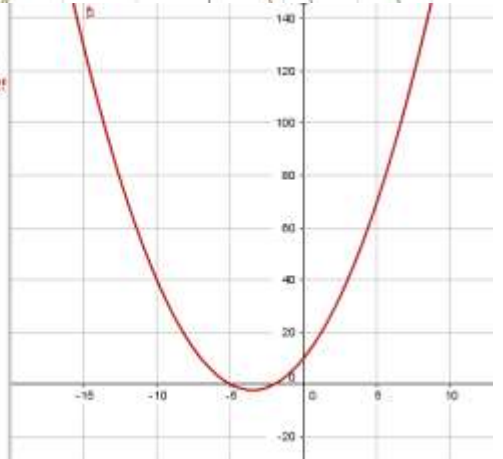
- Funktion
- $f(x) = -2x^2 - 20x + 5$
 - $g(x) = -2(x + 5)^2 - 8$
 - $h(x) = -2(x + 10)(x - 5)$



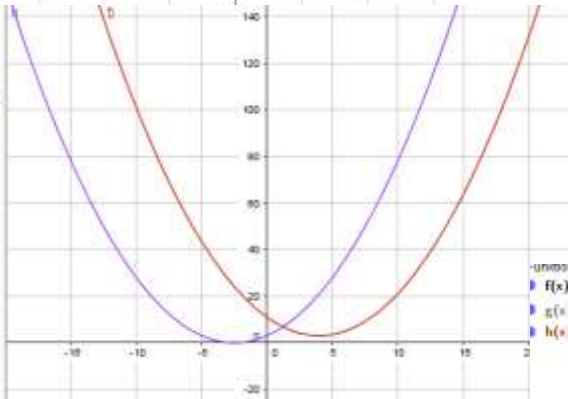
- Funktion
- $f(x) = x^2 + 4x - 5$
 - $g(x) = (x + 2)^2 - 9$
 - $h(x) = (x - 1)(x + 5)$



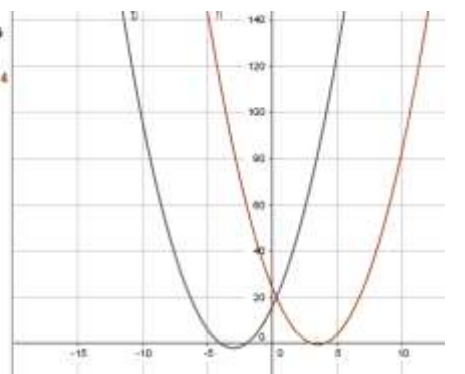
- Funktion
- $f(x) = x^2 + 7x + 10$
 - $h(x) = (x + 5)(x + 2)$
 - $p(x) = (x + 3.5)^2 - 2.25$



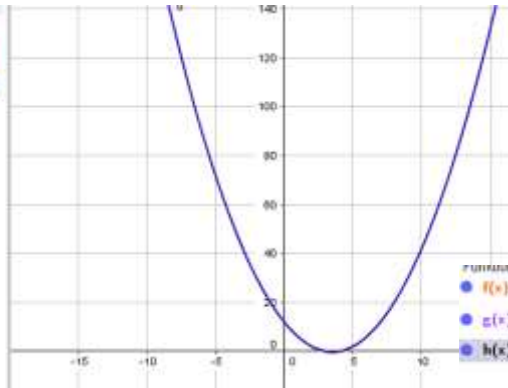
- Funktion
- $f(x) = \frac{1}{2}x^2 - 4x + 11$
 - $g(x) = \frac{1}{2}(x - 4)^2 + 3$
 - $h(x) = 0.5(x + 2)(x + 6)$



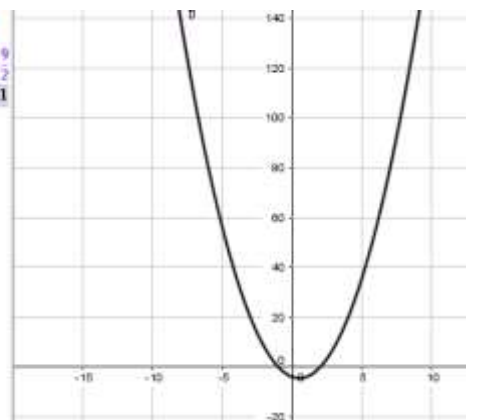
- Funktion
- $f(x) = 2x^2 + 12x + 16$
 - $g(x) = 2(x + 3)^2 - 2$
 - $h(x) = 2(x - 3)(x - 4)$



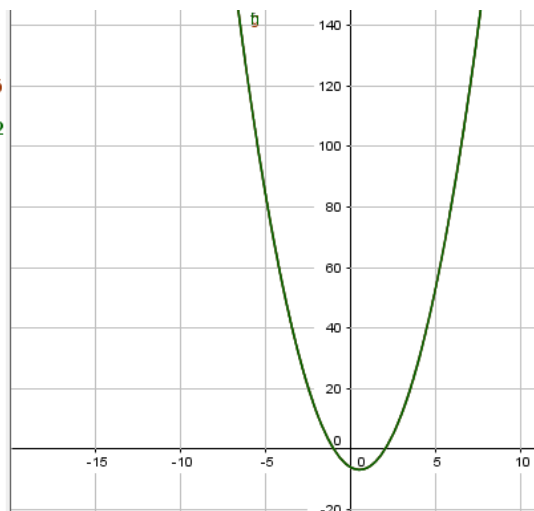
- Funktion
- $f(x) = x^2 - 7x + 12$
 - $g(x) = (x - 3.5)^2 - \frac{1}{2}$
 - $h(x) = (x - 3)(x - 4)$



- Funktion
- $f(x) = 2x^2 - 2x - 4$
 - $g(x) = 2(x - 0.5)^2 - \frac{9}{2}$
 - $h(x) = 2(x - 2)(x + 1)$



- Funktion
- $f(x) = 3x^2 - 3x - 6$
 - $g(x) = 3\left(x - \frac{1}{2}\right)^2 - 6$
 - $h(x) = 3(x + 1)(x - 2)$



Erstellt mit GeoGebra 4.0