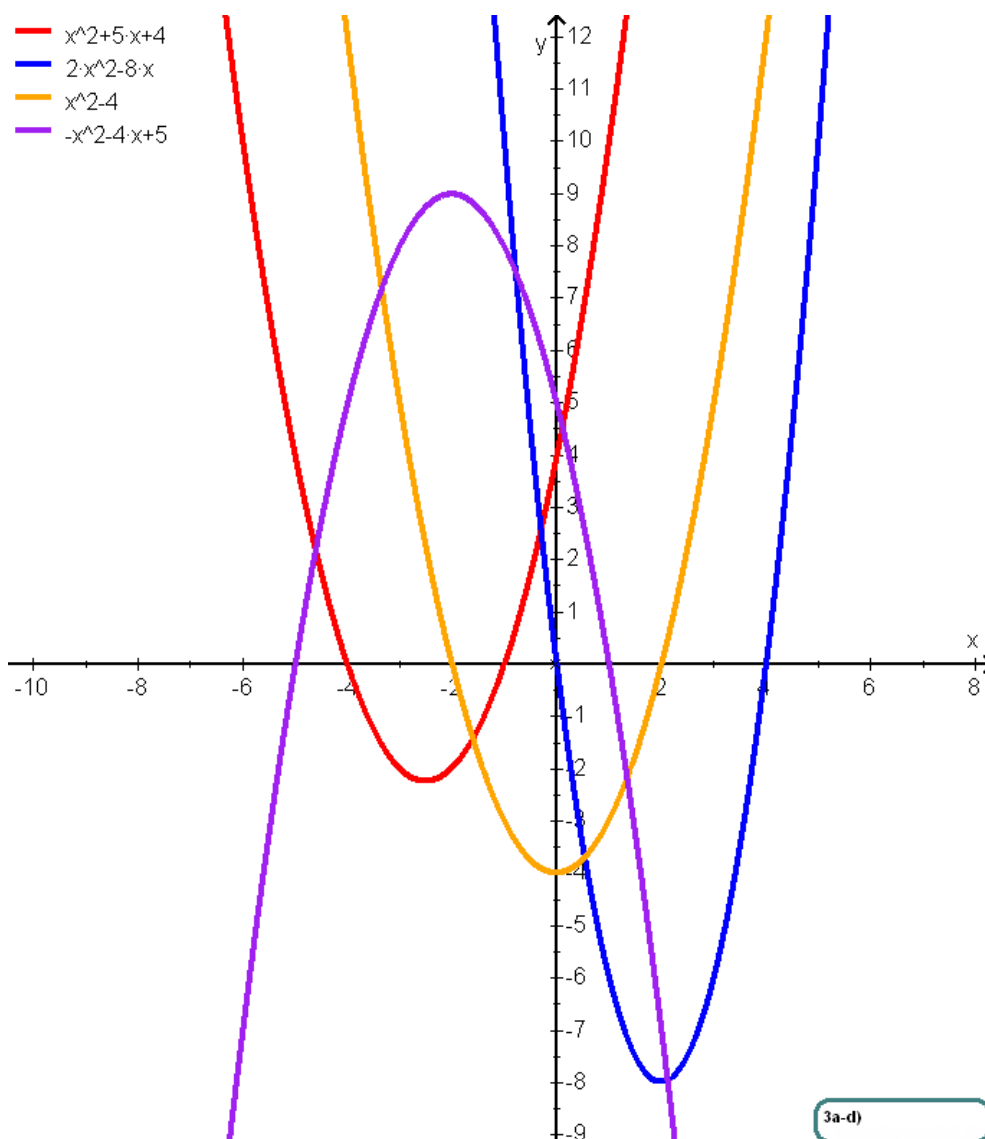


Lösungen:

<p>1</p>	<p>Bitte lösen Sie die Gleichungssysteme</p> <p>a)</p> $\begin{aligned} -4c + 3j - 2r &= 37 \\ -7c + 4r &= -2 \\ c - 2j &= -16 \end{aligned}$ <p>L:</p> $\begin{aligned} c &= -2; \\ j &= 7; \\ r &= -4; \end{aligned}$ <p>b)</p> $\begin{aligned} 4t - 3d &= -28 \\ -t + k &= -7 \\ 2d + 3k &= -8 \end{aligned}$ <p>L:</p> $\begin{aligned} t &= -1; \\ d &= 8; \\ k &= -8; \end{aligned}$ <p>c)</p> $\begin{aligned} -2,2t + 1,1x - 6,5f &= 23,7 \\ -8,3t + 1,6f &= -32,9 \\ -9,3t - 9,2x &= -9,5 \end{aligned}$ <p>L:</p> $\begin{aligned} t &= 3; \\ x &= -2; \\ f &= -5; \end{aligned}$
<p>2</p>	<p>Bitte berechnen Sie die Unbekannten</p> <p>a) $8i^2 - 192i + 1152 = 0$ L: $i_1 = 12; i_2 = 12;$</p> <p>b) $15c^2 - 45c + 810 = 0$ L: Keine Lösungen</p> <p>c) $-7y^2 + 154y - 847 = 0$ L: $y_1 = 11; y_2 = 11;$</p> <p>d) $-i^2 + 2i + 143 = 0$ L: $i_1 = 13; i_2 = -11;$</p> <p>e) $5f^2 + 75f + 130 = 0$ L: $f_1 = -13; f_2 = -2;$</p> <p>f) $j^2 - 16j + 65 = 0$ L: Keine Lösungen</p> <p>g) $11w^2 - 165w + 594 = 0$ L: $w_1 = 6; w_2 = 9;$</p> <p>h) $-10,6x^2 + 44,52x + 309,838 = 0$ L: $x_1 = 7,9; x_2 = -3,7;$</p> <p>i) $-1,2y^2 + 238,572 = 0$ L: $y_1 = -14,1; y_2 = 14,1;$</p> <p>j) $-13,1q^2 + 413,96q - 3270,284 = 0$ L: $q_1 = 15,8; q_2 = 15,8;$</p> <p>k) $-5,6x^2 + 64,96x - 174,048 = 0$ L: $x_1 = 7,4; x_2 = 4,2;$</p> <p>l) $-1,8u^2 - 1,08u + 323,046 = 0$ L: $u_1 = -13,7; u_2 = 13,1;$</p> <p>m) $-15,2k^2 - 212,8k - 349,448 = 0$ L: $k_1 = -1,9; k_2 = -12,1;$</p>

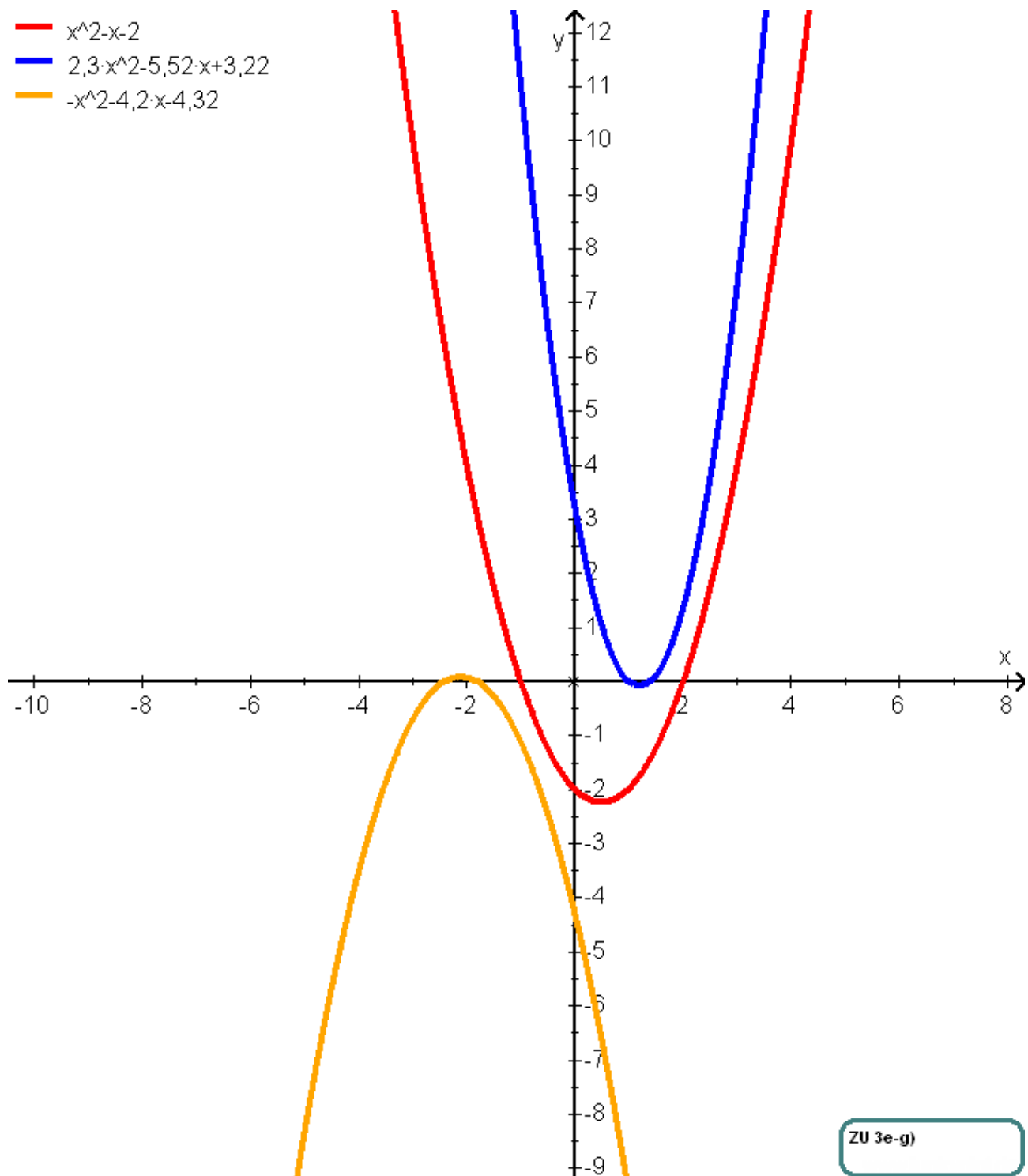
3	Bitte berechnen Sie die Achsenschnittstellen der angegebenen Funktionen. Zeichnen Sie die Funktionen.		
a) $f(x) = x^2 + 5x + 4$	L: $x_{N1} = -1;$	$x_{N2} = -4;$	$y_s = 4;$
b) $f(x) = 2x^2 - 8x$	L: $x_{N1} = 4;$	$x_{N2} = 0;$	$y_s = 0;$
c) $f(x) = x^2 - 4$	L: $x_{N1} = -2;$	$x_{N2} = 2;$	$y_s = -4;$
d) $f(x) = -x^2 - 4x + 5$	L: $x_{N1} = -5;$	$x_{N2} = 1;$	$y_s = 5;$
e) $f(x) = x^2 - x - 2$	L: $x_{N1} = -1;$	$x_{N2} = 2;$	$y_s = -2;$
f) $f(x) = 2,3x^2 - 5,52x + 3,22$	L: $x_{N1} = 1,4;$	$x_{N2} = 1;$	$y_s = 3,22;$
g) $f(x) = -x^2 - 4,2x - 4,32$	L: $x_{N1} = -1,8;$	$x_{N2} = -2,4;$	$y_s = -4,32;$
h) $f(x) = x^2 + 0,4x - 2,85$	L: $x_{N1} = 1,5;$	$x_{N2} = -1,9;$	$y_s = -2,85;$
i) $f(x) = 1,8x^2 + 0,18x - 2,376$	L: $x_{N1} = -1,2;$	$x_{N2} = 1,1;$	$y_s = -2,376;$
j) $f(x) = -1,7x^2 + 0,34x + 3,808$	L: $x_{N1} = -1,4;$	$x_{N2} = 1,6;$	$y_s = 3,808;$
k) $f(x) = -2,2x^2 - 4,7x - 4,8$	L: Keine Nullstellen;		$y_s = -4,8;$
l) $f(x) = -4,7x^2 - 3,2x - 2,1$	L: Keine Nullstellen;		$y_s = -2,1;$
m) $f(x) = -3,6x^2 + 9,3x - 4$	L: $x_{N1} = 2,0382;$	$x_{N2} = 0,5451;$	$y_s = -4;$

Zu 3a-d)



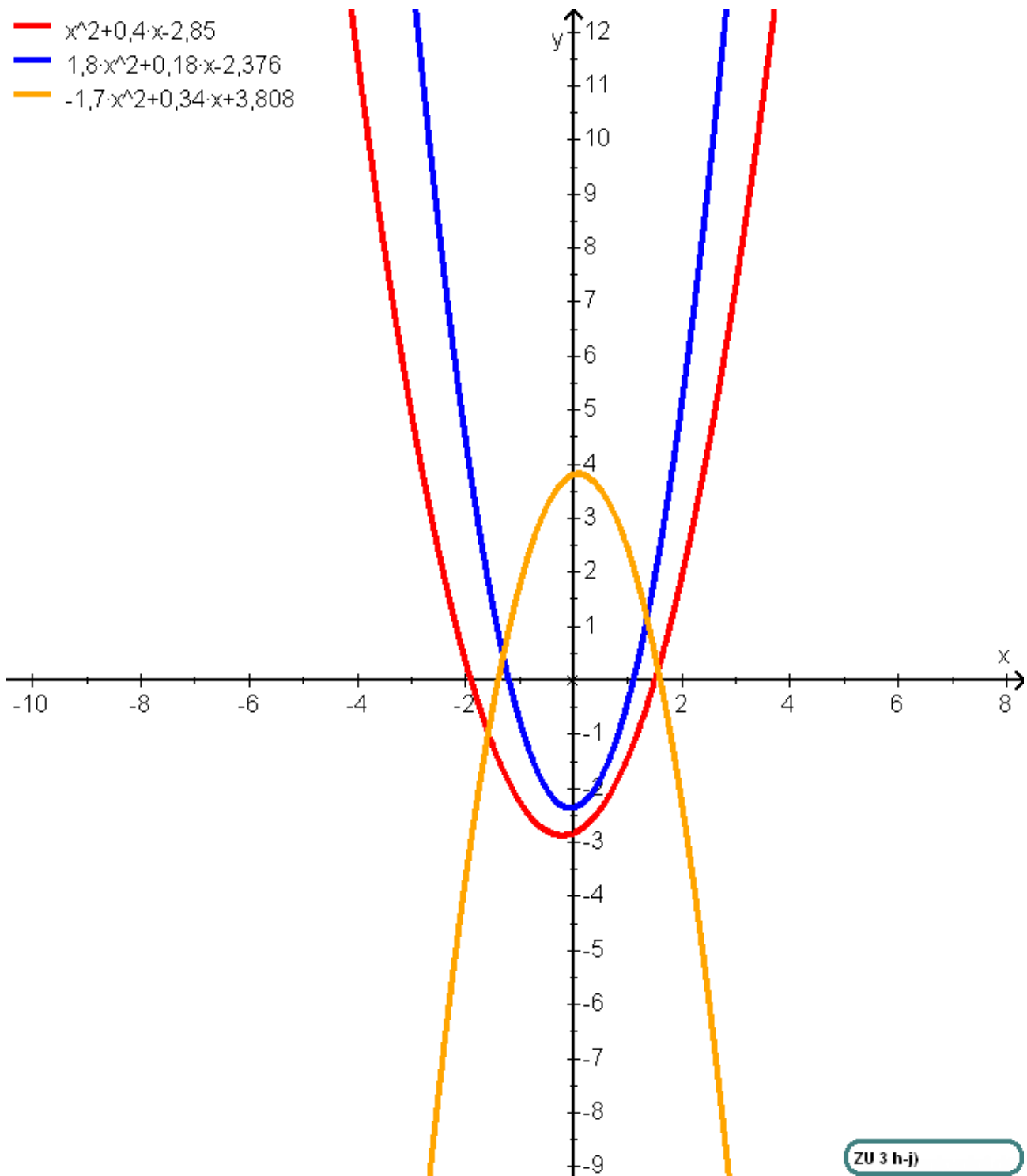
Zu 3e-g)

- x^2-x-2
- $2,3 \cdot x^2-5,52 \cdot x+3,22$
- $-x^2-4,2 \cdot x-4,32$



Zu 3h-j)

- $x^2+0,4x-2,85$
- $1,8x^2+0,18x-2,376$
- $-1,7x^2+0,34x+3,808$



Zu 3k-m)

- $-2,2 \cdot x^2 - 4,7 \cdot x - 4,8$
- $-4,7 \cdot x^2 - 3,2 \cdot x - 2,1$
- $-3,6 \cdot x^2 + 9,3 \cdot x - 4$

