

S. 38/1 (10II) S. 126/31 (8I)

a) $x^2 + 5x + 4 = 0$

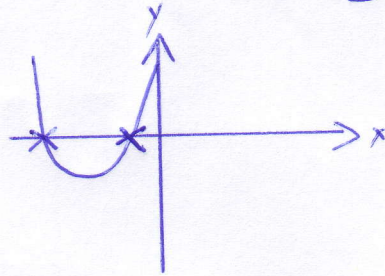
$a = 1 ; b = 5 ; c = 4$

$$x_{1/2} = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} = \frac{-5 \pm \sqrt{5^2 - 4 \cdot 1 \cdot 4}}{2 \cdot 1}$$

$$x_{1/2} = \frac{-5 \pm \sqrt{25 - 16}}{2} = \frac{5 \pm 3}{2}$$

$$x_1 = \frac{-5 + 3}{2} = \frac{-2}{2} = -1 \quad \vee \quad x_2 = \frac{-5 - 3}{2} = \frac{-8}{2} = -4$$

$$L = \{-1; -4\}$$

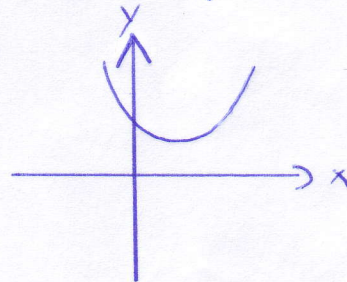


c) $3x^2 - 8x + 12 = 0$ $a = 3 ; b = -8 ; c = 12$

$$x_{1/2} = \frac{-(-8) \pm \sqrt{(-8)^2 - 4 \cdot 3 \cdot 12}}{2 \cdot 3} = \frac{8 \pm \sqrt{64 - 144}}{6}$$

$$x_{1/2} = \frac{8 \pm \sqrt{-80}}{6} \quad \text{nicht definiert}$$

$$L = \emptyset$$



d) $\frac{3}{4}x^2 + 6x + 12 = 0$ $a = 0,75 ; b = 6 ; c = 12$

$$x_{1/2} = \frac{-6 \pm \sqrt{6^2 - 4 \cdot 0,75 \cdot 12}}{2 \cdot 0,75} = \frac{-6 \pm \sqrt{36 - 36}}{1,5}$$

$$x_{1/2} = \frac{-6 \pm 0}{1,5} = \frac{-6}{1,5} = -4 \quad L = \{-4\}$$

