

1. Nullstellen linearer Funktionen:

- a) $f(x) = 2x - \frac{4}{3}$ $x_0 = \frac{2}{3}$
 b) $f(x) = -3x - \frac{6}{5}$ $x_0 = -\frac{2}{5}$
 c) $f(x) = \frac{3}{4}x + \frac{9}{8}$ $x_0 = -\frac{3}{2}$
 d) $f(x) = -\frac{2}{5}x + \frac{4}{3}$ $x_0 = \frac{10}{3}$
 e) $f(x) = -\frac{3}{7}$ keine Nullstelle

2. Berechnen Sie jeweils die Nullstellen folgender quadratischer Funktionen:

- a) $f(x) = x^2 + 2x - 3$ $x_{01} = 1$ $x_{02} = -3$
 b) $f(x) = x^2 + 7x + 12$ $x_{01} = -3$ $x_{02} = -4$
 c) $f(x) = x^2 + x - \frac{3}{4}$ $x_{01} = \frac{1}{2}$ $x_{02} = -\frac{3}{2}$
 d) $f(x) = 3x^2 - 10x + 3$ $x_{01} = 3$ $x_{02} = \frac{1}{3}$
 e) $f(x) = 15x^2 + 29x + 12$ $x_{01} = -\frac{3}{5}$ $x_{02} = -\frac{4}{3}$
 f) $f(x) = 36x^2 + 84x + 49$ $x_0 = -\frac{7}{6}$
 g) $f(x) = 7x^2 - 3x + 5$ keine Nullstelle
 h) $f(x) = 4x^2 + 7x - 8$ $x_{01} \approx 0,7880$ $x_{02} \approx -2,5380$