

## 5. DOMAČA NALOGA

**5.1** Določi ničle, pole, asimptote, definicijsko območje in skiciraj grafe naslednjih funkcij:

$$\begin{aligned}f_1(x) &= \frac{(x-1)^2(x+3)(x-4)^3}{(x+1)(x-3)(x+2)^4} \\f_2(x) &= \frac{(x^2-1)(x+3)(x^2-4)}{(x+1)^2(x-3)(x+2)^2} \\f_3(x) &= \frac{x^2}{x^2+1} \\f_4(x) &= \frac{(x-4)^2(x+3)^3(x+4)^3}{(x-1)^3(x-3)(x+2)^4} \\f_5(x) &= \frac{(x^4-16)(x-2)}{(x^2-1)^2(x-3)(x+2)^2} \\f_6(x) &= \frac{(x-1)^3(x-2)^2(x+2)^3}{(x+1)^2(x-3)(x+2)^4} \\f_7(x) &= \frac{x^6-x^2}{(x+3)^2(x-3)^3(x-4)^2}\end{aligned}$$