Lösung A1

$f_1(x) = x^2 + x;$ $f_1'(x) = 2x + 1$	$f_2(x) = 2x^2 - x + 5;$ $f_2'(x) = 4x - 1$
$f_3(x) = x^3 + x^2 + x + 1;$ $f_3'(x) = 3x^2 + 2x + 1$	$f_4(x) = -5x^4 + 3x^2;$ $f_4'(x) = -20x^3 + 6x$
$f_5(x) = 2x^2 - 3x^3 + 4x^4;$ $f_5'(x) = 4x - 9x^2 + 16x^3$	$f_6(t) = \frac{1}{4}t^4 + \frac{1}{3}t^3 + \frac{1}{2}t^2;$ $f_6'(t) = t^3 + t^2 + t$
$f_7(t) = 2{,}5t^5 + \frac{1}{t^2};$ $f_7'(t) = 12{,}5t^4 - \frac{2}{t^3}$	

Lösung A2

$f_1(x) = x^4 + x^8;$ $f_1'(x) = 4x^3 + 8x^7$	$f_2(x) = x^{12} + x^{-3};$ $f_2'(x) = 12x^{11} - 3x^{-4}$
$f_3(x) = \frac{1}{x} + x^4;$ $f_3'(x) = -\frac{1}{x^2 + 4x^3}$	$f_4(x) = \sqrt{x} - \frac{1}{x};$ $f_4'(x) = \frac{1}{2\sqrt{x}} + \frac{1}{x^2}$
$f_5(x) = \frac{1}{x} + x - 5;$ $f_5'(x) = -\frac{1}{x^2} + 1$	$f_6(t) = \frac{2}{5}t^{-1} + 1;$ $f_6'(t) = -\frac{2}{5}t^{-2}$
$f_7(t) = \sqrt{t} - t;$ $f_7'(t) = \frac{1}{2\sqrt{t}} - 1$	

Lösung A3

$f_1(x) = \frac{2}{x^{-2}} + x^2 = 3x^2;$ $f_1'(x) = 6x$	$f_2(x) = -\frac{3}{4}x^8 + 2{,}5x^4 - 2x + 4;$ $f_2'(x) = -6x^7 + 10x^3 - 2$
$f_3(x) = \frac{2}{9}x^3 + \frac{5}{8}x^2 + 0{,}4x - 1{,}6;$ $f_3'(x) = \frac{2}{3}x^2 + \frac{5}{4}x + 0{,}4$	$f_4(x) = f_4(x) = 3 \cdot \frac{1}{x} + 2x^{-3} - 5 + x^6;$ $f_4'(x) = -\frac{3}{x^2} - 6x^{-4} + 6x^5$
$f_5(x) = 4\sqrt{x} + \frac{1}{x^2} - \frac{1}{20}x^{-3} - \frac{1}{10x^{10}};$ $f_5'(x) = \frac{2}{\sqrt{x}} - \frac{2}{x^3} + \frac{3}{20}x^{-4} + \frac{1}{x^{11}}$	$f_6(t) = \frac{1}{2t} + 4\sqrt{t} - t + 1;$ $f_6'(t) = -\frac{1}{2t^2} + \frac{2}{\sqrt{t}} - 1$
$f_7(t) = \sqrt{20} \cdot t + \frac{1}{20t} + (20t)^2 - 20t;$ $f_7'(t) = \sqrt{20} - \frac{1}{20t^2} + 800t - 20$	