Lösungen zu den Übungen zu Stammfunktionen mit reellen Exponenten

a. $f(x) = x^{-5}$	$F(x) = -\frac{1}{4}x^{-4}$
b. $f(x) = 7x^{-8}$	$F(x) = -x^{-7}$
c. $f(x) = -3x^{-4}$	$F(x) = x^{-3}$
d. $f(x) = 3x^{-4} + 6x^{-3} - x^{-2}$	$F(x) = -x^{-3} - 3x^{-2} + x^{-1}$
e. $f(x) = \frac{2}{x} = 2 \cdot x^{-1}$	$F(x) = 2 \cdot \ln(x)$
f. $f(x) = -\frac{3}{x^2} = -3 \cdot x^{-2}$	$F(x) = 3 \cdot x^{-1}$
g. $f(x) = x^{\frac{5}{6}}$	$F(x) = \frac{1}{\frac{11}{6}} \cdot x^{\frac{5}{6}+1} = \frac{6}{11} \cdot x^{\frac{11}{6}}$
h. $f(x) = -3x^{\frac{1}{3}}$	$F(x) = -\frac{3}{\frac{4}{3}} \cdot x^{\frac{4}{3}} = -\frac{9}{4} \cdot x^{\frac{4}{3}}$
i. $f(x) = 3x^{-\frac{4}{7}}$	$F(x) = \frac{3}{\frac{3}{7}} \cdot x^{\frac{3}{7}} = 7 \cdot x^{\frac{3}{7}}$
j. $f(x) = \frac{12x^3+6x}{2x^4} = 6x^{-1} + 3x^{-3}$	$F(x) = 6 \cdot \ln(x) - \frac{3}{2} \cdot x^{-2}$