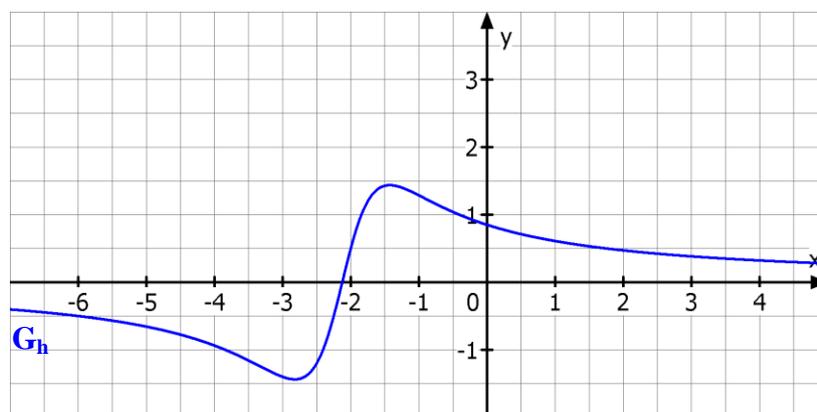
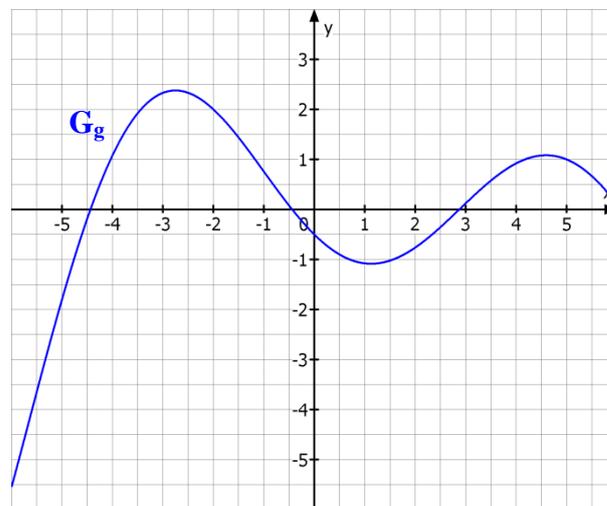
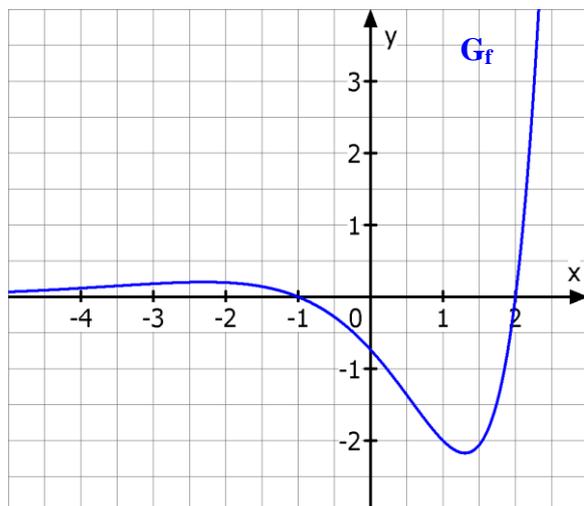


Q12 * Mathematik * Übungsaufgaben zur Analysis

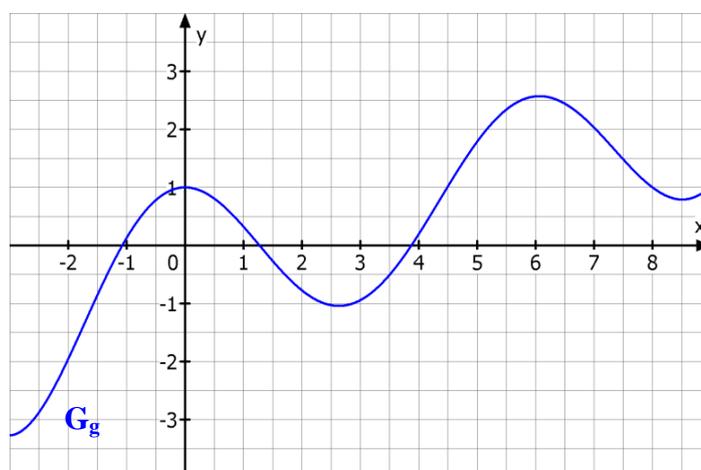
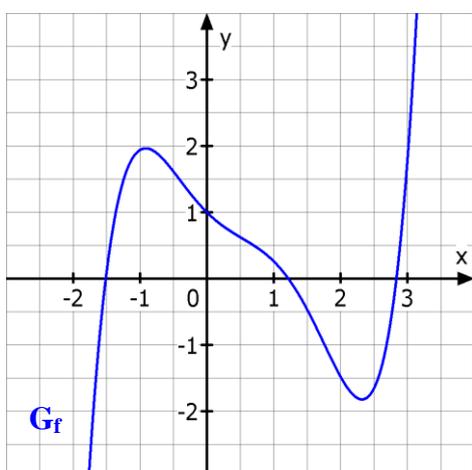
1. Die Bilder zeigen die Graphen der Funktionen f , g und h .

Skizzieren Sie die Graphen der Integralfunktionen $\int_1^x f(t) dt$, $\int_{-2}^x g(t) dt$ und $\int_{-1}^x h(t) dt$.



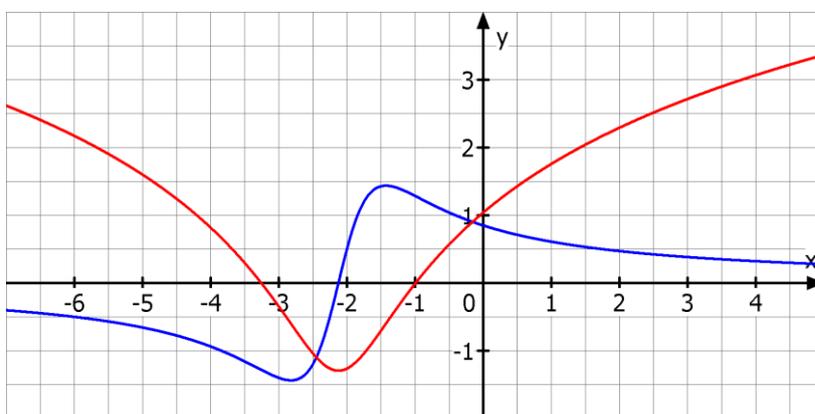
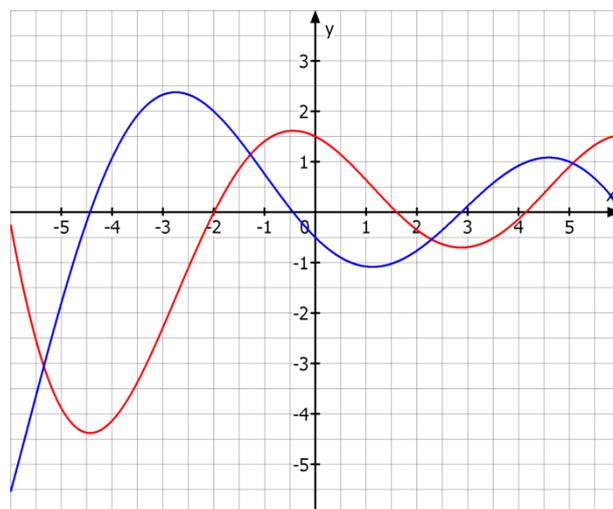
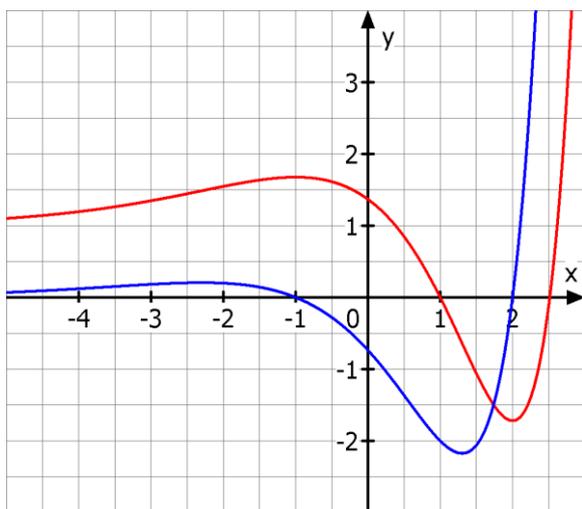
2. Die Bilder zeigen die Graphen der Funktionen f und g

Skizzieren Sie die Graphen der Ableitungsfunktionen f' und g' .

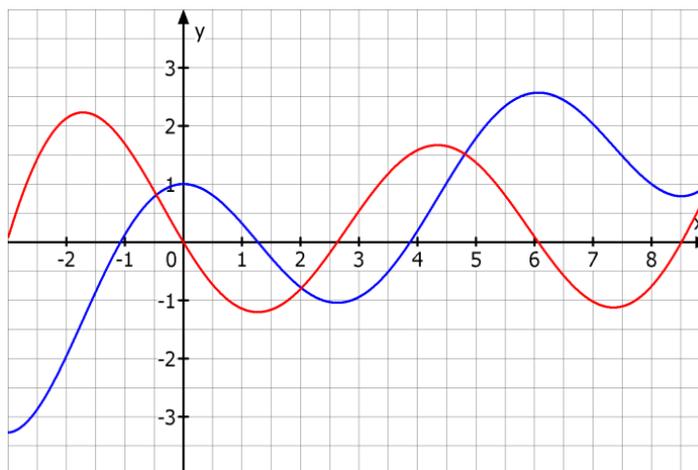
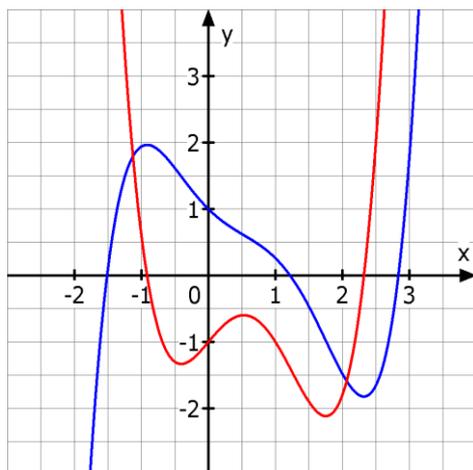


Q12 * Mathematik * Übungsaufgaben zur Analysis * Lösungen

1.



2.



1.

$$f(x) = (x^2 - x - 2) \cdot e^{x-1} \quad \text{und} \quad \int_{-2}^x g(t) dt = (0,2x^2 - x - 1) \cdot \sin(0,5x) + 1,5$$

$$\int_{-1}^x h(t) dt = \ln(0,2x^2 + 0,85x + 1) + 1,04$$

2.

$$f(x) = 0,16x^5 - 0,5x^4 + 0,6x^2 - x + 1 \quad \text{und} \quad g(x) = (0,15x^2 - 1,2x) \cdot \sin(0,7x) + 1$$