

Teil 2:

$$(I) \quad I_1 = [0; 4] \quad A(010,5) \quad B(414)$$

$$D[0; 4] = \frac{4 - 0,5}{4 - 0} = \frac{3,5}{4} = \frac{7}{8}$$

$$(II) \quad I_2 = [-3; 2] \quad C(-3|-3,5) \quad D(2|-1)$$

$$D[-3; 2] = \frac{-1 - (-3,5)}{2 - (-3)} = \frac{2,5}{5} = 0,5$$

$$(III) \quad I_3[-2,5; 1,25] \quad E(-2,5|-1,25) \quad F(1,25|-2,25)$$

$$D[-2,5; 1,25] = \frac{-2,25 - (-1,25)}{1,25 - (-2,5)} = \frac{-1}{3,75}$$

Teil 3:

$$(I) \quad f(x) = 3x^2 - 2x + 3 \quad I_1 = [0; 4]$$

$$D[0; 4] = \frac{f(4) - f(0)}{4 - 0} = \frac{43 - 3}{4} = 10$$

$$(II) \quad f(x) = \frac{2}{3}x^3 - 4x \quad I_2 = [-3; 2]$$

$$D[-3; 2] = \frac{f(2) - f(-3)}{2 - (-3)} = \frac{-\frac{8}{3} - (-6)}{5}$$

$$= \frac{\frac{10}{3}}{5} = \frac{2}{3}$$

$$(III) \quad f(x) = \frac{2}{7}x^4 - \frac{3}{5}x^2 + 2 \quad I_3 = [-2,5; 2]$$
$$D[-2,5; 2] = \frac{f(2) - f(-2,5)}{2 - (-2,5)} = \frac{\frac{146}{35} - \frac{527}{56}}{4,5}$$

$$= - \frac{\frac{1467}{280}}{4,5} = - \frac{\frac{163}{140}}{4,5}$$