

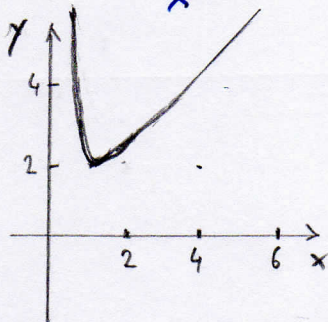
S 61 Nr. 10

a) $f(x) = x^2$; $D_1 = [-2, 1) \Rightarrow f(0) = 0$ globales Minimum
 $f(-2) = 4$ globales Maximum

$D_2 = (-2; 1] \Rightarrow f(0) = 0$ globales Minimum
 kein globales Maximum
 $f(1) = 1$ lokales Maximum

$D_3 = [-2; 2) \Rightarrow f(0) = 0$ globales Minimum
 $f(-2) = 4$ globales Maximum

b) $f(x) = \frac{1}{x} + x$

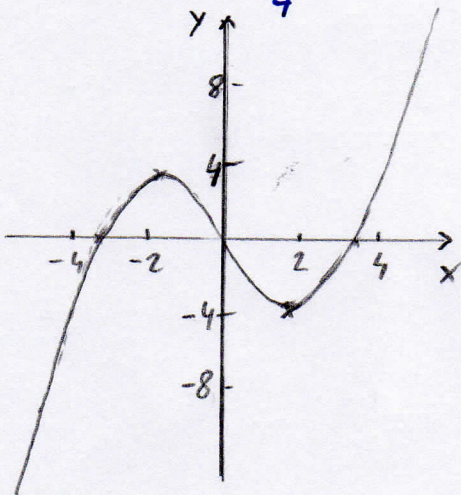


$D_1 = (0; 5] \Rightarrow f(1) = 2$ globales Minimum
 kein globales Maximum
 $f(5) = 5\frac{1}{5}$ lokales Maximum

$D_2 = [0, 1; 5] \Rightarrow f(1) = 2$ globales Minimum
 $f(0,1) = 10,1$ globales Maximum
 $f(5) = 5,2$ lokales Maximum

$D_3 = [2; 3] \Rightarrow f(2) = 2,5$ globales Minimum
 $f(3) = 3,\bar{3}$ globales Maximum

c) $f(x) = \frac{1}{4}x^3 - 3x$



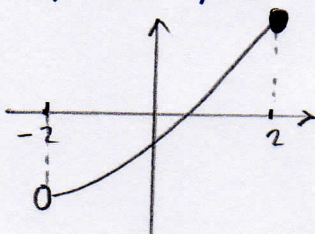
$D_1 = (-3, 4) \Rightarrow f(2) = -4$ globales Minimum
 $f(-2) = 4$ globales Maximum

$D_2 = (-5; 5] \Rightarrow f(5) = 16,25$ globales Maximum
 kein globales Minimum
 $f(-2) = 4$ lokales Maximum
 $f(2) = -4$ lokales Minimum

$D_3 = \mathbb{R} \Rightarrow$ kein globales Maximum
 kein globales Minimum
 $f(-2) = 4$ lokales Maximum
 $f(2) = -4$ lokales Minimum

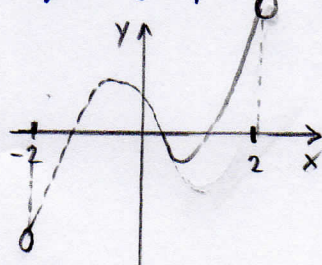
S 61 Nr. 11

a) $D = (-2; 2]$



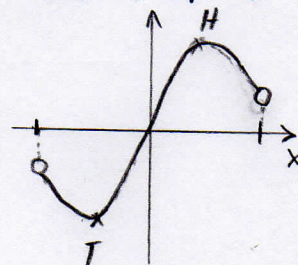
● Rand dabei

b) $D = (-2; 2)$



○ Rand nicht dabei

c) $D = (-2; +2)$



d) $D = (-2; +2)$

