Math Worksheet: Graphs of Functions (6)

Given function *f* by

$$f(x) = -2\ln(-x-2) - 1$$

1. Find the domain and range of *f*.

Domain: $(-\infty, -2)$; Range: $(-\infty, +\infty)$

2. Find the vertical horizontal asymptote of the graph of *f*.

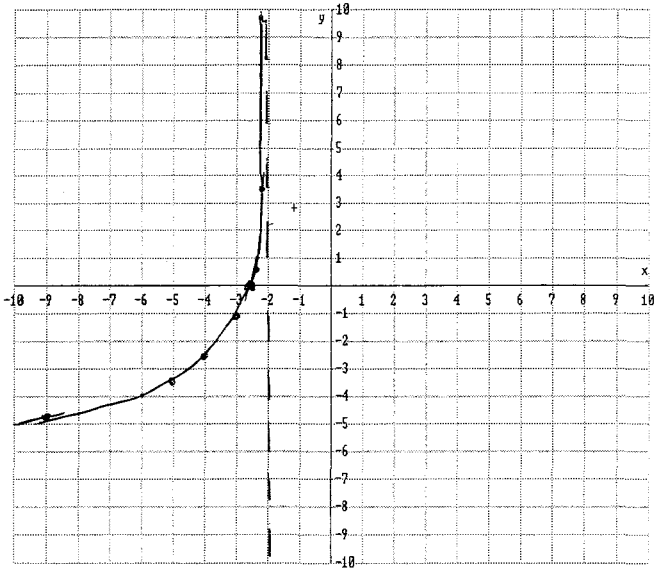
$x = -2$

3. Find the y and x intercepts, if any, of the graph of *f*.

No y-intercept , x-intercept : $(-2.6, 0)$

4. Sketch the graph of *f* and label the intercepts and the asymptote

x	f(x)
−9	−4.9
−5	−3.2
−4	−2.4
−3	−1
−2.5	0.4
−2.1	3.6



↑ Vertical asymptote $x = -2$.