Marked example 1

Paper 1 style · No calculator

1 6 marks SL 2.8

●○○ Routine

Let $f(x) = \dfrac{3x-6}{x+1}$, for $x \neq -1$.

(a) Write down the equations of the asymptotes of the graph of f. **[2]**

(b) Find the coordinates of the points where the graph of f meets the axes. **[2]**

(c) Write down the domain and the range of f. **[2]**

MARKSCHEME (a)

$x = -1$ **A1**

$y = 3$ **A1**

Total 2 marks

MARKSCHEME (b)

$(2,\ 0)$ **A1**

$(0,\ -6)$ **A1**

Total 2 marks

MARKSCHEME (c)

domain $x \neq -1$ **A1**

range $f(x) \neq 3$ **A1**

Total 2 marks

Written and verified by a practising IB mathematics teacher, produced with AI assistance; solved twice and recomputed by software.
Not affiliated with or endorsed by the International Baccalaureate Organization. © 2026 Hence