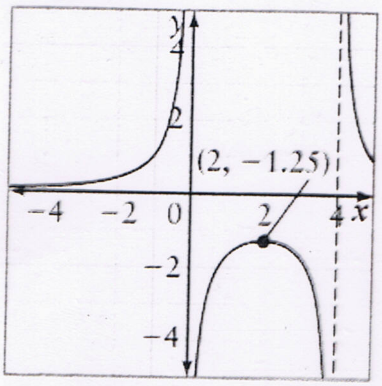
Complete the table to describe the behaviour of the function:

$$f(x)=\frac{1}{(x+2)(x+5)}$$

As $x \to$	$f(x) \to$
-2^+	$+\infty$
-2^-	$-\infty$
-5^+	$-\infty$
-5^-	$+\infty$
$+\infty$	0
$-\infty$	0

Make a summary table with the headings shown for the graph.
Then, determine a possible equation for the graph.



Interval	Sign of $f(x)$	Sign of Slope	Change in Slope
$x<0$	+	+	increasing
$0<x<2$	−	+	decreasing
$x=2$	−	0	0
$2<x<4$	−	−	decreasing
$x>4$	+	−	increasing

KEY CONCEPTS

- Rational functions can be analysed using key features: asymptotes, intercepts, slope (positive or negative, increasing or decreasing), domain, range, and positive and negative intervals.
- Reciprocals of quadratic functions with two zeros have three parts, with the middle one reaching a maximum or minimum point. This point is equidistant from the two vertical asymptotes.
- The behaviour near asymptotes is similar to that of reciprocals of linear functions.
- All of the behaviours listed above can be predicted by analysing the roots of the quadratic relation in the denominator.

Homework: pg 165; # 1 – 7, 8(odd) 9, 10, 16 – 18
Handin: pg 167; #15