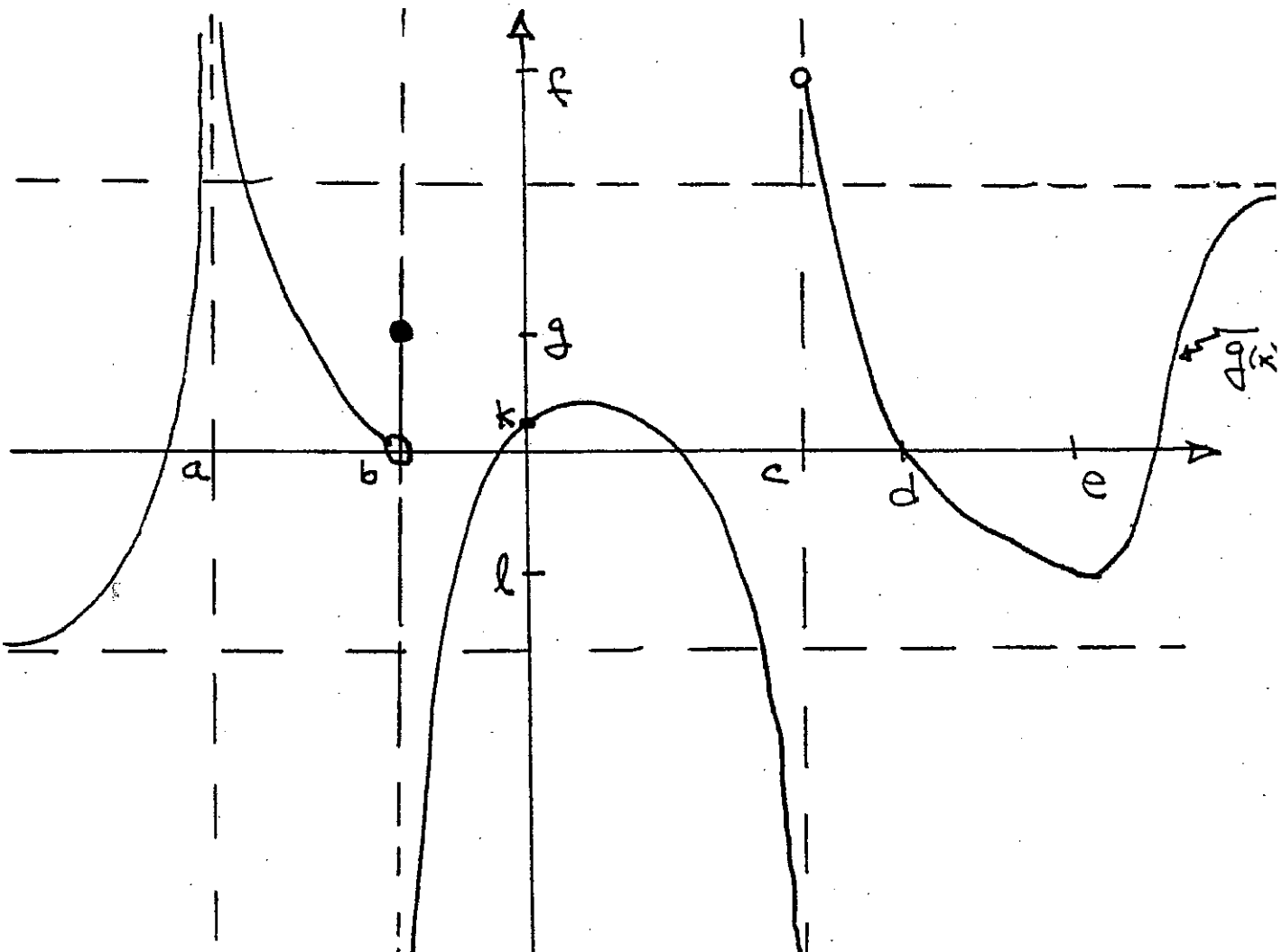
Limits: Graphically

Refer to the graph below in order to answer the following questions. If a limit doesn't exist explain why.

1. $\lim_{x \to \infty} g(x) =$
2. $\lim_{x \to -\infty} g(x) =$
3. $\lim_{x \to a^+} g(x) =$
4. $\lim_{x \to a^-} g(x) =$
5. $\lim_{x \to a} g(x) =$
6. $\lim_{x \to 0} g(x) =$
7. $\lim_{x \to b^+} g(x) =$
8. $\lim_{x \to b^-} g(x) =$
9. $\lim_{x \to b} g(x) =$
10. $\lim_{x \to c} g(x) =$
11. $\lim_{x \to d} g(x) =$
12. $\lim_{x \to e} g(x) =$
13. g(e) =
14. g(0) =
15. g(b) =



1.10 The Possibilities Are Limitless...

Refer to the graph of $R(x)$ to evaluate the following.

170. $\lim_{x\to\infty} R(x)$

171. $\lim_{x\to-\infty} R(x)$

172. $\lim_{x\to a^+} R(x)$

173. $\lim_{x\to a^-} R(x)$

174. $\lim_{x\to a} R(x)$

175. $\lim_{x\to 0} R(x)$

176. $\lim_{x\to b^+} R(x)$

177. $\lim_{x\to b^-} R(x)$

178. $\lim_{x\to b} R(x)$

179. $\lim_{x\to c} R(x)$

180. $\lim_{x\to d} R(x)$

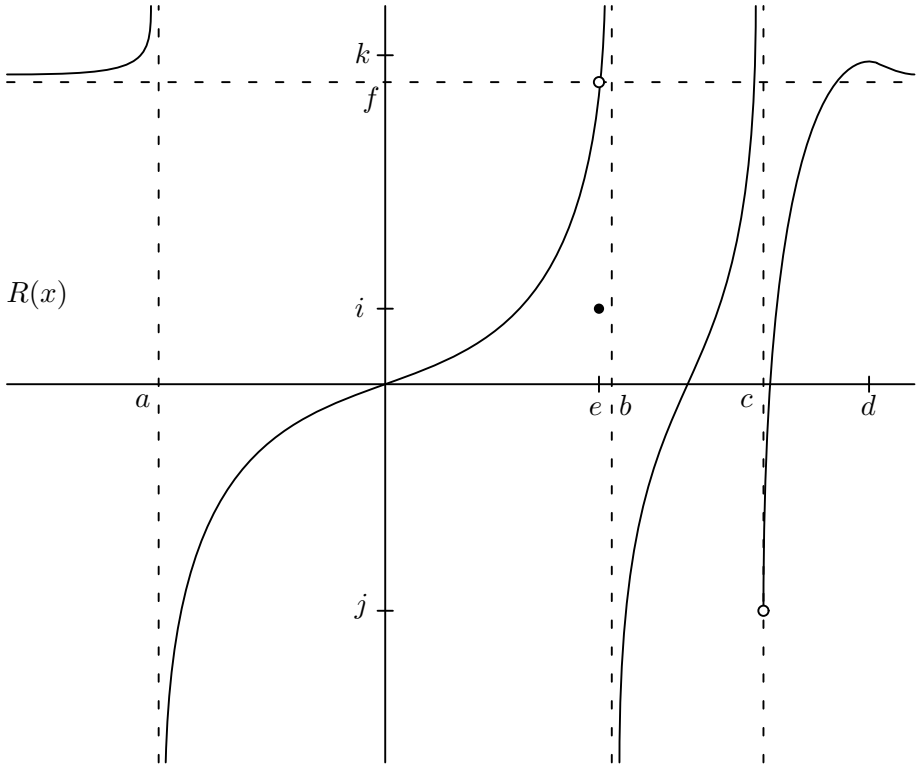
181. $\lim_{x\to e} R(x)$

182. $R(e)$

183. $R(0)$

184. $R(b)$

185. $R(d)$



One of the big misapprehensions about mathematics that we perpetrate in our classrooms is that the teacher always seems to know the answer to any problem that is discussed. This gives students the idea that there is a book somewhere with all the right answers to all of the interesting questions, and that teachers know those answers. And if one could get hold of the book, one would have everything settled. That's so unlike the true nature of mathematics. —*Leon Hankin*