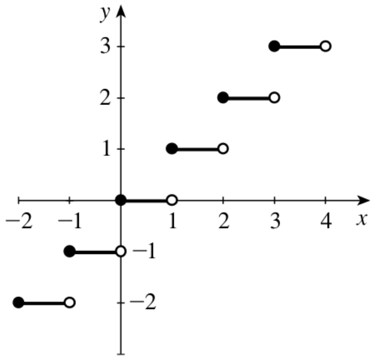
Refer to the diagram below for Exercises 23–27.



23. $\lim_{x\to 3^-} [\![x]\!] = 2$

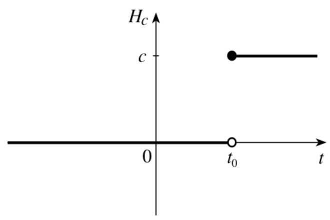
24. $\lim_{x\to 3^+} [\![x]\!] = 3$

25. $\lim_{x\to -1^+} [\![x]\!] = -1$

26. $\lim_{x\to -1} [\![x]\!]$ does not exist.

27. $\lim_{x\to 3.1} [\![x]\!] = 3$

33. The graph of $H_c(t - t_0)$ is shown in the figure. If $c \neq 0$, then $\lim_{t\to t_0^-} H_c = 0$ and $\lim_{t\to t_0^+} H_c = c$. Since the right-hand limit is not equal to the left-hand limit, $\lim_{t\to t_0} H_c$ does not exist.



34. From the given figure, for $n = 1, 2, 3, \ldots$, we have $\lim_{t\to[(2n-1)k]^-} f(t) = k$ and $\lim_{t\to[(2n-1)k]^+} f(t) = 0$, so $\lim_{t\to[(2n-1)k]} f(t)$ does not exist. Similarly, $\lim_{t\to[(2n)k]^-} f(t) = 0$ and $\lim_{t\to[(2n)k]^+} f(t) = k$, so $\lim_{t\to[(2n)k]} f(t)$ does not exist. Therefore, $\lim_{t\to nk} f(t)$ does not exist for $n = 1, 2, 3, \ldots$.