HW 3.5 Limits at Infinity

Find each limit if possible.

21. $\lim_{x\to\infty} \frac{2x-1}{3x+2}$

22. $\lim_{x\to\infty} \frac{3x^3+2}{-x^3-2x^2+7}$

23. $\lim_{x\to\infty} \frac{x}{x^2-1}$

24. $\lim_{x\to\infty} \left(4+\frac{3}{x}\right)$

25. $\lim_{x\to-\infty} \frac{5x^2}{x+3}$

26. $\lim_{x\to-\infty} \left(\frac{1}{2}x-\frac{4}{x^2}\right)$

27. $\lim_{x\to-\infty} \frac{x}{\sqrt{x^2-x}}$

28. $\lim_{x\to-\infty} \frac{x}{\sqrt{x^2+1}}$

29. $\lim_{x\to-\infty} \frac{2x+1}{\sqrt{x^2-x}}$

30. $\lim_{x\to-\infty} \frac{-3x+1}{\sqrt{x^2+x}}$

31. $\lim_{x\to\infty} \frac{\sin 2x}{x}$

32. $\lim_{x\to\infty} \frac{x-\cos x}{x}$

33. $\lim_{x\to\infty} \frac{1}{2x+\sin x}$

34. $\lim_{x\to\infty} \cos\frac{1}{x}$