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HOMEWORK: infinite limits and limits at infinit

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Exercises
Find the limit if it exists

1. $\lim_{x->-1^+} \frac{x-2}{x+1} = -\infty$

x	-0.999	-0.99	-0.9
f(x)	-2999	-299	-29

2. $\lim_{x->2^+} \frac{x+2}{x^2-4} = +\infty$

x	2.001	2.01	2.1
f(x)	1000	100	10

3. $\lim_{x->3^+} \frac{5}{3-x} = -\infty$

x	3.001	3.01	3.1
f(x)	-5000	-500	-50

4. $\lim_{x->0^-} \frac{2-4x^3}{5x^2+3x^3} = +\infty$

x	-0.001	-0.01	-0.1
f(x)	400'240	4024.15	42.63

5. $\lim_{x\to -1^+} \frac{x^3+1}{2x+2} = 1.5$

x	-0.999	-0.99	-0.9
f(x)	1.4985	1.48	1.355

6. $\lim_{x->3^-} \frac{x^3+9x^2+20x}{x^2+x-12} = +\infty$

x	2.999	2.99	2.9
f(x)	-23'989.001	-2389.01	-229.1

7. $\lim_{x\to+\infty} \frac{x^2-1}{x^2+1} = 1$

8. $\lim_{x\to\infty} \frac{x^2+x}{4-x} = \not\exists$

9. $\lim_{x\to+\infty} \frac{x^2-1}{x^3+x^2-4x-4} = \not\exists$

10. $\lim_{x\to-\infty} \frac{8-x^3}{x^3-4x^2+4x} = -1$