Homework 15

Calculate the following limits:

1. $\lim_{x\to\infty} x^2 - 3x + 2$
2. $\lim_{x\to\infty} \dfrac{x^2 - 3x + 2}{x - 1}$
3. $\lim_{x\to\infty} \dfrac{x^2 - 3x + 2}{x^2 - 1}$
4. $\lim_{x\to\infty} \dfrac{x^2 - 3x + 2}{3x^2 - 1}$
5. $\lim_{x\to\infty} \dfrac{x^2 - 3x + 2}{x^3 - 1}$
6. $\lim_{x\to\infty} \sqrt{x^2 - 1}$
7. $\lim_{x\to\infty} \sqrt{x^2 - 1} - \sqrt{x}$
8. $\lim_{x\to\infty} \sqrt{x^2 - 1} - \sqrt{x^2 + 1}$
9. $\lim_{x\to\infty} \sqrt{x^2 - 1} - \sqrt{2 - x^2}$
10. $\lim_{x\to\infty} \sqrt{3x - 1} - \sqrt{x + 2}$
11. $\lim_{x\to 0^+} \dfrac{1}{x}$
12. $\lim_{x\to 0^-} \dfrac{1}{x}$
13. $\lim_{x\to 0} \dfrac{1}{x}$
14. $\lim_{x\to 0^+} \dfrac{1}{x^2}$
15. $\lim_{x\to 0^-} \dfrac{1}{x^2}$
16. $\lim_{x\to 0} \dfrac{1}{x^2}$
17. $\lim_{x\to 0} \dfrac{1}{x - 1}$
18. $\lim_{x\to 1} \dfrac{1}{x^2 - 1}$
19. $\lim_{x\to 1} \dfrac{1}{(x - 1)^2}$