Continuity

In problems 1-12, determine the continuity of the function

1. $f(x)=x^2-7x+2$	2. $f(x)=\dfrac{5}{x^2-25}$
3. $f(x)=\dfrac{1}{x^2-12x+27}$	4. $f(x)=\dfrac{x-3}{2x^2-5x+3}$
5. $f(x)=\dfrac{x}{x^2+16}$	6. $f(x)=\dfrac{x+5}{x^2-x-30}$
7. $f(x)=\sqrt{x+7}$	8. $f(x)=\sqrt[3]{4x-1}$
9. $f(x)=\begin{cases}4x-1, & x\le 2\\ -9x+25, & x>2\end{cases}$	10. $f(x)=\begin{cases}x^2+3, & x\le 1\\ -x+4, & x>1\end{cases}$
11. $f(x)=\begin{cases}4x-1, & x<3\\ 7x-10, & 3\le x<5\\ x^2-1, & x\ge 5\end{cases}$	12. $f(x)=x\sqrt{x-5}$

In problems 13-14, graph the function and determine the continuity

13. $f(x)=\dfrac{x^2-9}{x+3}$	14. $f(x)=\dfrac{x+6}{x^2+3x-18}$

In problems 15-18, determine the continuity. If there are any discontinuities, indicate if they are removable.

15. $f(x)=\dfrac{3x-1}{x^2-4}$	16. $f(x)=\dfrac{x^2+7x+10}{x^2+5x+6}$
17. $f(x)=\dfrac{2x^2-17x+21}{x^2-1}$	18. $f(x)=\dfrac{7x^2+27x-4}{x^2-4x-32}$