Derivatives with Quotient Rule

Use the product rule to differentiate the following.

1. $f(x) = \frac{x}{x+5}$
2. $f(x) = \frac{x}{x+7}$
3. $f(x) = \frac{2x}{x-8}$
4. $f(x) = \frac{5x}{x+8}$
5. $f(x) = \frac{x-4}{x+3}$
6. $f(x) = \frac{x+4}{x-8}$
7. $f(x) = \frac{2x-9}{x^2-1}$
8. $f(x) = \frac{4x-9}{x^2+4}$
9. $f(x) = \frac{5x}{x^2+7}$
10. $f(x) = \frac{7x}{x^2+5}$
11. $f(x) = \frac{4x+3}{5x-7}$
12. $f(x) = \frac{5x+3}{3x-7}$
13. $f(x) = \frac{\sqrt{x}}{x+5}$
14. $f(x) = \frac{\sqrt{x}}{x-8}$
15. $f(x) = \frac{\sqrt{x}+5}{\sqrt{x}-2}$
16. $f(x) = \frac{\sqrt{x}-5}{\sqrt{x}+2}$
17. $f(x) = \frac{6x^2}{x^2-5x+3}$

18. $f(x) = \frac{4x^2}{x^2-x+8}$

19. $f(x) = \frac{x^4}{1+\sqrt{x}}$

20. $f(x) = \frac{x^6}{1-\sqrt{x}}$

21. $f(x) = \frac{2x^2+1}{x^4-12}$

22. $f(x) = \frac{3x^2+4}{x^4+8}$