Math 121 - Antiderivatives Worksheet

Find the general antiderivative.

1. $f(x) = 2x$
2. $f(x) = 2x + 1$
3. $f(x) = 3x^2 - 2x$
4. $f(x) = x$
5. $f(x) = ax^2 + bx$
6. $f(x) = \sqrt{x}$
7. $f(x) = 1/(2\sqrt{x})$
8. $f(x) = 3(x+1)^2$
9. $f(x) = \sin(x)$
10. $f(x) = \cos(x)$
11. $f(x) = 2\sin(x)\cos(x)$
12. $f(x) = 5\cos(5x)$
13. $f(x) = \sec^2(x)$
14. $f(x) = 1/x^3$
15. $f(x) = 1/x^2$
16. $f(x) = 1/x$
17. $f(x) = e^x$
18. $f(x) = e^{2x}$
19. $f(x) = x\cos(x) + \sin(x)$
20. $f(x) = xe^x + e^x$
21. $f(x) = 1 + \ln x$
22. $f(x) = \dfrac{(x+1)(2) - (2x-1)(1)}{(x+1)^2}$
23. $f(x) = \dfrac{3}{(x+1)^2}$
24. $f(x) = \cos^2(x) - \sin^2(x)$
25. $f(x) = 1/\sqrt{x}$
26. $f(x) = \dfrac{2x\cos(\sqrt{x^2+3})}{2\sqrt{x^2+3}}$
27. $f(x) = 2^x + 1$
28. $f(x) = \dfrac{3x^2 - 2x}{x^3 - x^2 + 1}$