Application on derivatives

Calculate the derivative of the following functions:

1. Y = cos(2x)	2. Y = $cos^3(2x)$	3. Y = $sin^2(3x)$
4. Y = $x^2 \sin(2x)$	5. Y = $\frac{2x}{\cos(2x)}$	6. Y = $tan^3(3x)$
7. Y = $x^2.\sqrt{2x+1}$	8. Y = $\frac{1}{\sqrt{2x+1}}$	9. Y = 2 + tan(4x)
10. Y = -2sin(5x)	11. Y = $3x^2 + 2tan^2(3x)$	12. Y = $sec^2(3x)$
13. Y = $\frac{2t}{t^2+1}$	14. Y = $3t^2cos^2t$	15. Y = $7x^2(1+x^2)^2$
16. Y = $\sqrt{2+\cos(3x)}$	17. Y = 2cot(3x)	18. Y = $2cot^3(3x)$
19. Y = $(3\tan(5x))^3$	20. Y = $\sqrt{2+\tan(2x)}$	21. Y = $5sin^3(\frac{x}{3})$
22. Y = $\sqrt{t}.\cos(\sqrt{t})$	23. Y= $(1+2cos^3(3x))^3$	24. Y = $\frac{1}{cos^3(3\sqrt{x^2+1})}$
25. Y = $(1+2\cos(3x))^3$	26. Y = $cos^2x + 3\,sin^2x$	27. Y = $2x^2 + \sec(3x)$
28. Y = $\frac{\sin(2x)}{\cos(3x)}$	29. Y = $3tan^2$(3x)	30. Y = $\frac{2xcos(2x)}{1+x^2}$
31. Y = $x^2.\sqrt{x}$	32. Y = $sin^2(\sqrt{2cos^2(3x)+1})$	33. Y = $2sin^2x.cos^2x$