The Chain Rule: Find the derivative of each function using the Chain Rule.

1. $y = (x^2 + 4)^3$

2. $y = (\cos x - x)^6$

3. $y = x(x^4 - 5)^3$

4. $y = \dfrac{1}{(x^2 - 9)^3}$

5. $y = (3\tan x - 2)^4$

6. $y = x\cos(1 - x^2)$

7. $y = \dfrac{\tan^2 x + 1}{1 - x}$

8. $y = (\sec^3 x - 4x^2)^5$

9. $y = \dfrac{x - \sin \pi x}{4 + \cos \pi x}$

10. $y = \tan(6x) - 6\tan x$

11. $y = \left[\sin(\pi x^3) - \cos(\pi x)\right]^6$

12. Find the equation of the tangent line to the graph of $y = \left(\dfrac{3x^2 + 1}{x + 3}\right)^2$ at the point (-1,4).