Derivative Worksheet Name

Find the first derivative for each of the following. Use proper notation and show all steps. NO calculators are allowed.

1. $f(x) = \dfrac{a - b^2 x}{c}$

2. $g(z) = 5e^{-3z} + e^3$

3. $h(t) = \arcsin(t^3) - \ln(t^2 + 1)$

4. $r(p) = \tan^3(4p)$

5. $w(y) = \pi^y y^\pi$

6. $h(\theta) = \dfrac{\sin\theta}{1+\cos\theta}$

7. $k(x) = \dfrac{x}{(g(x))^2}$ where $g(x)$ is a function and $g(x) \neq 0$

8. $y = \dfrac{2\pi}{3x} + \sqrt[5]{x^2}$

9. $g(w) = \left[\dfrac{3w-5}{2w+1}\right]^3$

10. $f(x) = (\ln 3)^x$