

## Regla de la cadena

Utilizando reglas de derivación, calcular la derivada de las funciones siguientes.

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

s  d

2.  $u = \left(t + \frac{1}{t}\right)^{10}$

s  d

3.  $z = 4\sqrt{1 - y^2}$

s  d

4.  $w = \frac{5}{(3u^2 + 1)^2}$

s  d

5.  $x = \frac{6}{\sqrt[3]{y^5 - 2}}$

s  d

6.  $y = \sqrt{x + \sqrt{\frac{1}{x}}}$

s  d

7.  $f(x) = \sqrt{\frac{1 - 3x^2}{x}}$

s  d

8.  $f(z) = \sqrt{4z^2 + \sqrt{27 - 2z}}$

s  d

9.  $y = \sqrt[3]{\frac{4t + 1}{2 - 5t}}$

s  d

10.  $y = x\sqrt{x + \sqrt{x + 1}}$

s  d

11.  $x = \frac{3y^2}{\sqrt{y^2 + 1}}$

s  d

12.  $y = \frac{1}{x - \sqrt{x^2 - 1}}$

s  d

13.  $f(z) = \frac{\sqrt{z} + 1}{(\sqrt{z} + 3)^2}$

s  d

14. Si  $f(w) = \frac{\sqrt{w+1} + 3}{(w^2 + 1)^3}$ , calcular  $f'(1)$

s  d

15. Sean  $\Phi(s) = \sqrt{1 - \psi(s)}$ ,  $\psi(-2) = -3$  &  $\psi'(-2) = 3$ , calcule  $\Phi'(-2)$

s  d