13.3) Finding functions

Worked example	Your turn
The curve with equation $y = f(x)$ passes through $(3, 1)$. Given that $f'(x) = 4x^3$, find the equation of the curve.	The curve with equation $y = f(x)$ passes through $(1,3)$. Given that $f'(x) = 3x^2$, find the equation of the curve. $$y = x^3 + 2$$

Worked example	Your turn
The curve with equation $y = f(x)$ passes through $\left(8, \frac{6408}{11}\right)$. Given that $f'(x) = \frac{x^3+4}{\sqrt[3]{x}}$, find the equation of the curve.	The curve with equation $y = f(x)$ passes through $(4, 5)$. Given that $f'(x) = \frac{x^2-2}{\sqrt{x}}$, find the equation of the curve. $$y = \frac{2}{5}x^{\frac{5}{2}} - 4x^{\frac{1}{2}} + \frac{1}{5}$$