

AO1 Exercise

Activity 3

What facts, concepts and techniques do students have to use to do these questions successfully?

A. Specimen paper P1

1. Given that $y = 4x^3 - \frac{5}{x^2}$, $x \neq 0$, find in their simplest form

(a) $\frac{dy}{dx}$, (3)

(b) $\int y \, dx$ (3)

B. Practice paper P2

- (a) Find the first four terms, in ascending powers of x , in the binomial expansion of

$$\left(1 - \frac{1}{8}x\right)^{10}$$

giving each term in its simplest form.

C Practice paper P1

1. The point $P(3, -4)$ lies on the curve with equation $y = f(x)$

State the coordinates of the image of P under the transformation represented by the curve with equation

(a) $y = f(x - 2)$ (1)

(b) $y = -f(x)$ (1)

(c) $2y = f(x)$ (1)

(d) $y = f(x) + 4$ (1)