

4.

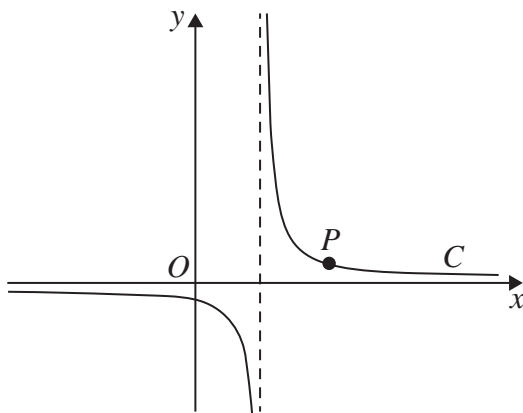


Figure 1

Figure 1 shows a sketch of part of the curve C with equation $y = f(x)$ where

$$f(x) = \frac{1}{x - 2}$$

(a) State

- (i) the equation of the asymptote of C that is parallel to the y -axis
- (ii) the coordinates of the point of intersection of C with the y -axis

(2)

The point $P(3, 1)$ lies on C , as shown in Figure 1.

(b) Find the point to which P is mapped when C is transformed to the curve with equation

- (i) $y = f(x) + 4$
- (ii) $y = f(2x)$

(2)