

2 You are given that y is inversely proportional to x^6 and z is directly proportional to the cube root of y .

(a) (i) Find an equation for z in terms of x and k , where k is a constant of proportionality. [2]

(ii) State which of the diagrams below could represent the graph of z against x . [1]

Fig. 1.1

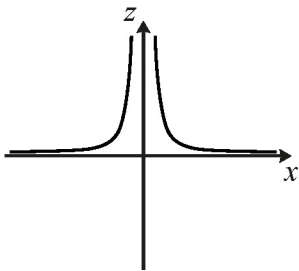


Fig. 1.2

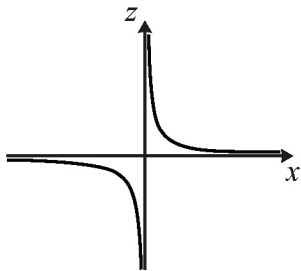


Fig. 1.3

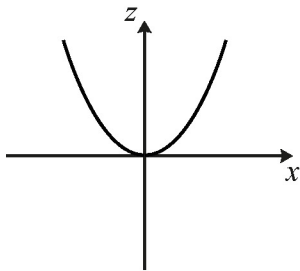
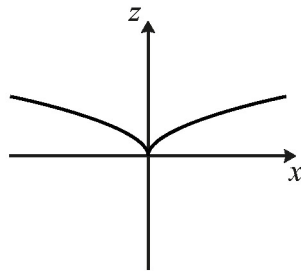


Fig. 1.4



(b) Given that $z = 3$ when $x = 4$, determine the values of x when $z = 12$. [3]