

$$\text{a) } \lim_{x \rightarrow -2} \frac{x^3 + 8}{x + 2}$$

$$\text{c) } \lim_{x \rightarrow 2} \frac{x^3 - x^2 - 5x + 6}{x - 2}$$

$$\text{b) } \lim_{x \rightarrow 4} \frac{2x - 8}{x^2 - x - 12}$$

$$\text{d) } \lim_{x \rightarrow -3} \frac{x^3 - 10x - 3}{x^2 + 2x - 3}$$

13  $\lim_{x \rightarrow 3} \frac{x^5 - 243}{x^3 - 27}$  equals:

a 0

b  $\frac{5}{3}$

c 15

d 9

14  $\lim_{x \rightarrow 2} \frac{x^2 - 4a}{x - 2}$  exists then a equals:

a -1

b 1

c 2

d 4

15  $\lim_{x \rightarrow 2} \frac{5}{(x-2)^3}$  equals:

a  $-\frac{5}{2}$

b zero

c 5

d has no limit

$$22 \quad \lim_{x \rightarrow 2} \frac{x^2 - 7x + 10}{x^2 - 2x}$$

$$25 \quad \lim_{x \rightarrow 0} \frac{\frac{1}{2+x} - \frac{1}{2}}{x}$$

$$28 \quad \lim_{x \rightarrow 2} \frac{x^3 + 3x^2 - 12x + 4}{x^3 - 4x}$$

$$31 \quad \lim_{x \rightarrow 2} \frac{x^5 - 32}{x - 2}$$

$$34 \quad \lim_{x \rightarrow 2} \frac{x^9 - \frac{1}{512}}{x - 2}$$

$$23 \quad \lim_{x \rightarrow -1} \frac{x^2 + 6x + 5}{x^2 - 3x - 4}$$

$$26 \quad \lim_{x \rightarrow -2} \frac{x + 2}{x^4 - 16}$$

$$29 \quad \lim_{x \rightarrow 4} \frac{x^3 - 4x^2 - x + 4}{2x^2 - 7x - 4}$$

$$32 \quad \lim_{x \rightarrow 2} \frac{x^{-8} - (16)^{-2}}{x - 2}$$

$$35 \quad \lim_{x \rightarrow \sqrt{5}} \frac{x^7 - 125\sqrt{5}}{x^4 - \sqrt{25}}$$

$$24 \quad \lim_{x \rightarrow 9} \frac{x + \sqrt{x} - 12}{x - 9}$$

$$27 \quad \lim_{x \rightarrow 1} \left( \frac{2}{x} + \frac{x^2 - x}{x - 1} \right)$$

$$30 \quad \lim_{x \rightarrow 3} \frac{x^2 - 9}{x^3 - 2x^2 + 2x - 15}$$

$$33 \quad \lim_{x \rightarrow 1} \frac{\sqrt[7]{x} - 1}{x - 1}$$

$$36 \quad \lim_{x \rightarrow 81} \frac{\sqrt[4]{x} - 3}{x - 81}$$