

2od1

$$\log_3 \sqrt{27} - \log_{27} \sqrt{3}$$

$$3^x = 3^{\frac{3}{2}}$$

$$x = \frac{3}{2}$$

$$27^x = \sqrt{3}$$

$$3^{3x} = 3^{\frac{1}{2}}$$

$$3x = \frac{1}{2} \quad | :3$$

$$x = \frac{1}{6}$$

$$\frac{8}{6} - \frac{1}{6} = \frac{7}{6} = \frac{4}{3}$$

(A)

2od2

$$f(x) = \frac{x^3 - 8}{x - 2} \quad x \neq 2$$

$$f'(x) = \frac{3x^2}{1} = 3x^2$$

$$3 \cdot \left(\frac{1}{2}\right)^2 = 3 \cdot \frac{1}{4} = \frac{3}{4} \quad (A)$$

2od4



16 via
6 range



4 bidie
3 mme

50/50

$$|\Omega| = 14, \quad P(A) = \frac{5}{14} \quad (A)$$

2od5

$$\lim_{n \rightarrow \infty} \frac{(7p-1)n^3 + 5pn - 3}{(p+1)n^3 + n^2 + p} = \frac{4}{3}$$

$$\lim_{n \rightarrow \infty} \frac{n^3 \left(7p-1 + \frac{5p}{n^2} - \frac{3}{n^3} \right)}{n^3 \left(p+1 + \frac{1}{n} + \frac{p}{n^3} \right)} = \frac{4}{3}$$

$$\frac{7p-1}{p+1} = \frac{4}{3}$$

$$3(7p-1) = 4(p+1)$$

$$21p-3 = 4p+4$$

$$17p = 7 \quad | :17$$

$$p = \frac{7}{17}$$

411