

FUNCTIONS

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1 SECTION B

- 19) If the fractional part of the number $\frac{2^{403}}{15}$ is $\frac{k}{15}$, then k is equal to: (JEE M 2019-9 Jan(M))
- a) 6
 - b) 8
 - c) 4
 - d) 14
- 20) If the function $f: \mathbb{R} - \{-1, 1\} \rightarrow A$ is defined by $f(x) = \frac{x^2}{1-x^2}$, is surjective then A is equal to: (JEE M 2019-9 Jan(M))
- a) $\mathbb{R} - \{1\}$
 - b) $(0, \infty)$
 - c) $\mathbb{R} - [-1, 0)$
 - d) $(-1, 0)$
- 21) let $\sum_{k=1}^{10} f(a+k) = 16(2^{10} - 1)$, where the function f satisfies $f(x+y) = f(x)f(y)$ for all natural numbers x,y and $f(a) = 2$.then the natural number ‘a’ is: (JEE M 2019-9 April(M))
- a) 2
 - b) 16
 - c) 4
 - d) 3