SSC CGL/CHSL TIER II 2023

CRASH COURSE FREE

MATHS

50 TOP SIMPLIFICATION

DAY-1

LIVE 02:00 PM

Q1. If $x = 1 + \cfrac{1}{1+\cfrac{1}{1+\cfrac{1}{1+\frac{1}{2}}}}$ then, the value of $2x + \frac{7}{4}$

(1) 3
(2) 4
(3) 5
(4) 6

Q2. Simplify : $\frac{19}{43} \div \frac{1}{2+\frac{2}{3+\frac{1}{1+\frac{1}{4}}}}$

(1) 10
(2) 19/43
(3) 43/19
(4) 38/43

Q3.Simplify : $1+\cfrac{1}{1+\cfrac{2}{2+\cfrac{3}{1+\frac{4}{5}}}}$

(1) 1 (11/17)
(2) 1(5/7)
(3) 1(6/17)
(4) 1(21/17)

Q4.Simplify : $8\frac{1}{2} - \left[3\frac{1}{4} \div \left\{1\frac{1}{4} - \frac{1}{2}\left(1\frac{1}{2} - \frac{1}{3} - \frac{1}{6}\right)\right\}\right]$

(1) 4 (1/2)
(2) 4 (1/6)
(3) 9 (1/2)
(4) 2/9

Q5. $\frac{9}{20} - \left[\frac{1}{5} + \left\{\frac{1}{4} + \left(\frac{5}{6} - \overline{\frac{1}{3} + \frac{1}{2}}\right)\right\}\right]$

(1) 0
(2) 1
(3) 9/20
(4) 10/9

$Q6.\ \dfrac{3\frac{1}{4}-\frac{4}{5}of\frac{5}{6}}{4\frac{1}{3}+\frac{1}{5}-\left(\frac{3}{10}+21\frac{1}{5}\right)}-\left(1\frac{2}{3}\ or\ 1\frac{1}{2}\right)$ **is equal to-**

(1) 9
(2) 11 (1/2)
(3) 13
(4) 15 (1/2)

Q8. $\frac{0.1\times0.1\times0.1+0.2\times0.2\times0.2+0.3\times0.3\times0.3-3\times0.1\times0.2\times0.3}{0.1\times0.1+0.2\times0.2+0.3\times0.3-0.1\times0.2-0.2\times0.3-0.3\times\times0.1}$

Is -

(1) 0.006
(2) 0.6
(3) 0
(4) 0.2

Q9.If * represent a number , then the value of * in $5\frac{3}{*} \times 3\frac{1}{2} = 19$ is:

यदि * किसी संख्या का प्रतिनिधित्व करते हैं, तो में $5\frac{3}{*} \times 3\frac{1}{2} = 19$ * का मान

(1) 7
(2) 4
(3) 6
(4) 2

Q10.The value of $\sqrt{5+\sqrt{11+\sqrt{19+\sqrt{29+\sqrt{49}}}}}$ is

(1) 3
(2) 9
(3) 7
(4) 5

Q11.Find the value of $\sqrt{248+\sqrt{52+\sqrt{144}}}$

(1) -16
(2) $\pm$ 16
(3) 16
(4) 16.2

Q12. $\sqrt{8+\sqrt{57+\sqrt{38+\sqrt{108+\sqrt{169}}}}}=?$

(1) 4
(2) 6
(3) 8
(4) 10

Q13. $\sqrt{12\sqrt{12\sqrt{12\sqrt{12}}}\ldots\ldots\ldots\infty}$

(1) 3
(2) 4
(3) 12
(4) NOT

Q14. $\sqrt{12+\sqrt{12+\sqrt{12+\sqrt{12+}}}}\ldots\ldots\ldots\infty$

(1) 3
(2) 4
(3) 12
(4) NOT

Q15. $\sqrt{6+\sqrt{6+\sqrt{6+\ldots\ldots}}}\ \infty$ **is equal to**

(1) -2
(2) 3
(3) 6
(4) -6

Q16. $\sqrt{110 - \sqrt{110 - \sqrt{110 \ldots\ldots \infty}}}$

(1) 10
(2) 11
(3) -11
(4) NOT

Q17. $\sqrt{5+\sqrt{5+\sqrt{5+\ldots\ldots\infty}}}$

(1) $\frac{1\pm\sqrt{20}}{2}$

(2) $-\frac{1\pm\sqrt{21}}{2}$

(3) $\frac{1+\sqrt{21}}{2}$

(4) NOT

Q18. $\sqrt{7-\sqrt{7-\sqrt{7-\ldots\ldots\infty}}}$

(1) $-\frac{1+\sqrt{29}}{2}$

(2) $\frac{1\pm\sqrt{77}}{2}$

(3) 7

(4) NOT

Q19. $\sqrt{5.\sqrt{5.\sqrt{5}}}$

(1) $5^{6/7}$
(2) $5^{7/8}$
(3) $5^{5/7}$
(4) NOT

Q20.The largest number among $\sqrt{2}, \sqrt[3]{3}, \sqrt[4]{4}$

(1) $\sqrt{2}$
(2) $\sqrt[3]{3}$
(3) $\sqrt[3]{4}$
(4) All are equal

Q21.FIND THE SMALLEST ONE $\sqrt[3]{4}, \sqrt[4]{5}, \sqrt[6]{12}$

(1) $\sqrt[6]{12}$
(2) $\sqrt[3]{4}$
(3) $\sqrt[3]{3}$
(4) $\sqrt[4]{5}$

Q22 .The value of $\frac{1}{\sqrt{2}+1}+\frac{1}{\sqrt{3}+\sqrt{2}}+\frac{1}{\sqrt{4}+\sqrt{3}}+\ldots\ldots+\frac{1}{\sqrt{100}+\sqrt{99}}$

(1) 1
(2) 9
(3) $\sqrt{99}$
(4) $\sqrt{99}-1$

Q23.Find the value of following

$$\sqrt{5 + 2\sqrt{6}}$$

(1) $(\sqrt{3} + \sqrt{2})$
(2) $(\sqrt{3} - \sqrt{2})$
(3) $(\sqrt{5} - \sqrt{3})$
(4) NOT

Q24. $\left(\frac{x^a}{x^b}\right)^{(a+b)} \times \left(\frac{x^b}{x^c}\right)^{(b+c)} \times \left(\frac{x^c}{x^a}\right)^{(c+a)}$

(1) 1
(2) 0
(3) 2
(4) NOT

Q25. $\left(2-\frac{1}{3}\right)\left(2-\frac{3}{5}\right)\left(2-\frac{5}{7}\right)\ldots\left(2-\frac{997}{999}\right)$ equals.

A. 5/999

B. 5/3

C. 1001/999

D. 1001/3