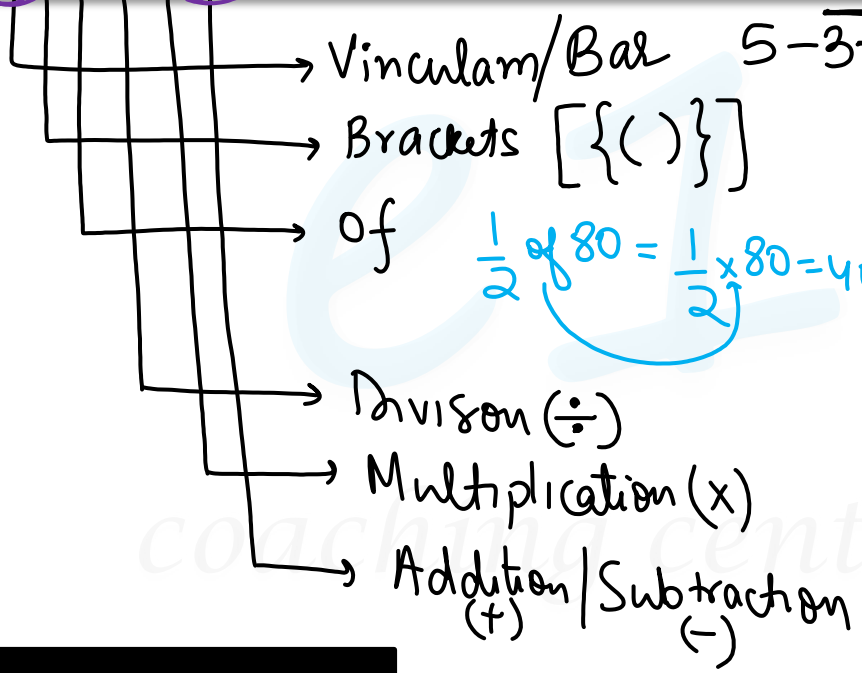
VBODMAS:



$5-\overline{3+4} = 5-(3+4)$

$= 5-7 = -2$

$5-3+4 = 9-3 = 6$

$\frac{1}{2}$ of $80 = \frac{1}{2} \times 80 = 40$

$$5 + 3 \times 4 \div 2 - |[4\{3\ of\ 2 - (5 - \overline{2+7})\}]$$

6 2 9 -4 +4 × 10 40

$5 + 6 - 40 = -29$

-40

1. The value of $27 \div 16 + [119 \div \{1491 \div 3(21 - 13 \times 8 + 4 \times 3)\}]$ is .

$272 \div 16 + [119 \div \{1491 \div 3(21 - 13 \times 8 + 4 \times 3)\}]$ को हल कीजिए |

a) -9 b) 11 c) 0 d) 4.8

$17 + (-17)$

$= 17 - 17 = 0$

-17

-7

1491

$21 - 104 + 12$

33

-71

2. Simplify: $\frac{\frac{5}{3}\times\frac{7}{51}\text{ of }\frac{17}{5}-\frac{1}{3}}{\frac{2}{9}\times\frac{5}{7}\text{ of }\frac{28}{5}-\frac{2}{3}}$

a) $\frac{1}{2}$ b) 4 c) 2 d) $\frac{1}{4}$

$$\frac{\frac{7}{9}-\frac{1}{3}\times\frac{3}{3}}{\frac{8}{9}-\frac{2}{3}\times\frac{3}{3}}=\frac{\frac{4}{9}}{\frac{2}{9}}=\frac{4}{\cancel{9}}\times\frac{\cancel{9}}{2}=2$$

$\frac{p}{q} \div \frac{m}{n}$

$= \frac{p}{q} \times \frac{n}{m}$

$\frac{p}{q} - \frac{m}{n} \times \frac{a}{b}$

$= \frac{p}{q} \times \frac{n}{m} \times \frac{a}{b}$

3. Simplify $\frac{1+\frac{1}{2}}{1-\frac{1}{2}} \div \frac{4}{7}\left(\frac{2}{5}+\frac{3}{10}\right)$ of $\frac{\frac{1}{2}+\frac{1}{3}}{\frac{1}{2}-\frac{1}{3}}$

a) $\frac{2}{3}$ b) $37\frac{1}{2}$ c) $\frac{3}{2}$ d) $18\frac{3}{8}$

$= \frac{\frac{3}{2}}{\frac{1}{2}} \div \frac{1}{7} \times \frac{7}{10}$ of $\frac{\frac{5}{6}}{\frac{1}{6}}$

$= 3 \div \frac{2}{5} \times 5$

$= \frac{3}{2} = 15$

$\frac{1+1}{2} \div \frac{3+2}{6}$

$\frac{5}{6} \times \frac{6}{1}$

$\frac{P}{q} \div \left(\frac{m}{n} \text{ of } \frac{a}{b}\right)$

$= \frac{P}{q} \div \left[\frac{m}{n} \times \frac{a}{b}\right]$

$= \frac{P}{q} \times \frac{n\ b}{m\ a}$

$\frac{P}{q} \times \frac{n}{m} \times \frac{b}{a}$

$\frac{P}{q} \div \frac{m}{n} \times \frac{a}{b}$

$5 \div 3 \times 2$

$= 5 \times \frac{1}{3} \times 2$

$5 \div (3 \text{ of } 2)$

$= 5 \times \frac{1}{2 \times 3}$

4. Simplify

$$\left[3\frac{1}{4} \div \left\{1\frac{1}{4} \div \frac{1}{2}\left(2\frac{1}{2} - \overline{\frac{1}{4} - \frac{1}{6}}\right)\right\}\right] \div \left(\frac{1}{2} \text{ of } 4\frac{1}{3}\right)$$

a) 18 b) 36 c) 39 d) 78

$\frac{6}{6} \times \frac{5}{4}$

$\frac{6}{6}\frac{5}{2} - \frac{1}{12}$

$\frac{1}{2} \times \frac{13}{3}$

$\frac{1}{2} \times \frac{29}{12} = \frac{29}{24}$

$\frac{13}{4} \div \frac{1}{24}$

$= \frac{13}{4} \times \frac{24}{1} = 78$

$\frac{\cancel{78}^{6}}{\cancel{13}} \times \frac{6}{1} = 36$

5. **Evaluate:**

$$\frac{9\,|3-5|-5\,|4|\div 10}{-3(5)-2\times\frac{4\div 2}{2}}$$

a) $\frac{9}{10}$ b) $-\frac{8}{10}$ c) $-\frac{16}{19}$ d) $\frac{4}{7}$

$$\frac{16}{-19}=\frac{18-2}{-15-4}$$

Modulus | Mode

$|5| = 5$

$|-5| = 5$

$|3-4| = |-1| = 1$

$$M = \frac{3}{7} \times \frac{5}{6} \times \frac{2}{3} + \frac{1}{5} \times \frac{3}{2}$$

$$= \frac{5}{21} + \frac{3}{10} = \frac{113}{210}$$

$$N = \frac{2}{5} \times \frac{5}{6} \times \frac{3}{1} + \frac{2}{5} \times \frac{2}{3} \times \frac{5}{3}$$

$$= 1 + \frac{2}{3} = \frac{5}{3}$$

$$\frac{113 \times 3}{210 \times 5} \quad (7)$$

6. If $M = \frac{3}{7} \div \frac{6}{5} \times \frac{2}{3} + \frac{1}{5} \times \frac{3}{2}$ and $N = \frac{2}{5} \times \frac{5}{6} \div \frac{1}{3} + \frac{3}{5} \times \frac{2}{3} \div \frac{3}{5}$, then what is the value of $\frac{M}{N}$?

यदि $M = \frac{3}{7} \div \frac{6}{5} \times \frac{2}{3} + \frac{1}{5} \times \frac{3}{2}$ तथा $N = \frac{2}{5} \times \frac{5}{6} \div \frac{1}{3} + \frac{3}{5} \times \frac{2}{3} \div \frac{3}{5}$ हैं, तो $\frac{M}{N}$ का मान क्या है?

a) $\frac{207}{560}$ b) $\frac{339}{1120}$

c) $\frac{113}{350}$ d) $\frac{69}{175}$

$$A = \frac{13}{4} \times \frac{17}{4} \times \frac{1}{34} + \frac{47}{32}$$

$$= \frac{13}{32} + \frac{47}{32} = \frac{60}{32} = \frac{15}{8}$$

$$B = \frac{5}{5}\frac{5}{2} + \frac{11}{2} \times \frac{1}{55} - \frac{11}{10}$$

$$= \frac{25+1-11}{10} = \frac{15}{10} = \frac{3}{2}$$

7. If $A = 3\frac{1}{4} \times 4\frac{1}{4} \div 34 - \frac{47}{32} + \frac{47}{16} \times \frac{2}{2}$ and $B = 2\frac{1}{2} + 5\frac{1}{2} \div 55 - \frac{11}{10}$, then what is the value of $A - B$?

यदि $A = 3\frac{1}{4} \times 4\frac{1}{4} \div 34 - \frac{47}{32} + \frac{47}{16}$ तथा $B = 2\frac{1}{2} + 5\frac{1}{2} \div 55 - \frac{11}{10}$ हो, तो $A - B$ का मान क्या हैं?

a) $\frac{5}{8}$ (b) 1

c) 0 d) $\frac{3}{8}$

$$\frac{15}{8} - \frac{3 \times 4}{24} = \frac{3}{8}$$

SSC CGL T2, 2017

8. What is the value of $\left[\frac{1}{5}+\left\{\frac{1}{7}of\left(\frac{25}{42}\div\frac{35}{6}\right)-\left(\frac{4}{7}\times\frac{6}{5}\div\frac{54}{63}\right)\right\}+\frac{28}{40}\right]$?

$\left[\frac{1}{5}+\left\{\frac{1}{7}of\left(\frac{25}{42}\div\frac{35}{6}\right)-\left(\frac{4}{7}\times\frac{6}{5}\div\frac{54}{63}\right)\right\}+\frac{28}{40}\right]$ का मान क्या होगा?

a) $\frac{383}{3430}$ b) $\frac{99}{490}$ c) $\frac{393}{3430}$ d) $\frac{403}{3430}$

$\frac{25}{42}\times\frac{6}{35}$

$\frac{5}{343}+\frac{1}{10}=\frac{393}{3430}$

$\frac{1}{5}+\frac{5}{343}-\frac{4}{5}+\frac{7}{10}$

$+\frac{1}{10}$

$\frac{1}{7}\times\frac{25}{42}\times\frac{6}{35}-\frac{4}{7}\times\frac{6}{5}\times\frac{63}{54}$

5 7 7

SSC CHSL, 8 June 2022 S2

9. Simplify: $\frac{\frac{27}{14} \div \frac{24}{7} of \frac{63}{28} - \frac{9}{4}}{\frac{35}{8} \div \frac{15}{4} of \frac{7}{48} + \frac{5}{16}} \div \frac{196}{95}$

सरलीकरण करें: $\frac{\frac{27}{14} \div \frac{24}{7} of \frac{63}{28} - \frac{9}{4}}{\frac{35}{8} \div \frac{15}{4} of \frac{7}{48} + \frac{5}{16}} \div \frac{196}{95}$

a) $-\frac{40}{357}$ b) $-\frac{40}{343}$ c) $\frac{40}{343}$ d) $-\frac{40}{243}$

$\frac{27}{14} \div \frac{24}{7} \times \frac{63}{28}$

$\frac{27}{14} \times \frac{7}{24} \times \frac{28}{63}$

$\frac{\frac{27}{14} \times \frac{7}{24} \times \frac{28}{63} - \frac{9}{4}}{\frac{35}{8} \times \frac{4}{15} \times \frac{48}{7} + \frac{5}{16}} = \frac{-2 \times 16}{133} \times \frac{5}{196}$

$= \frac{-40}{343}$

SSC CHSL, 6 June 2022 S1

10. What is the value of p, if $25(3+4p) \div 12$ of $5 - 3 \times 8 = 6$?

यदि $25(3+4p) \div 12 of 5 - 3 \times 8 = 6$ है, तो p का मान क्या है?

a) 72 b) 69 c) $15\frac{1}{3}$ d) $17\frac{1}{4}$

$$\frac{75+100p}{60} - 24 = 6$$

$$\Rightarrow 75+100p = 1800$$

$$\Rightarrow p = \frac{1725}{100}$$

11. 56% of $4800 - \{(9^3 \times 8) \div \sqrt{6561}\} - 48\%$ of $(81 \div 8) = ?$

56% of $4800 - \{(9^3 \times 8) \div \sqrt{6561}\} - 48\%$ of $(81 \div 8) = ?$

a) 2612.86 ~~b) 2611.14~~

c) 2611.86 d) 2612.14

$$56 \times 48 - \left\{\frac{9^3 \times 8}{81}\right\} - \frac{48}{100} \times \frac{81}{8}$$

$$= 56 \times 48 - 72 - \frac{6 \times 81}{100}$$

$$= 6[56 \times 8 - 12 - .81]$$

$$= 6[435.19] = 2611.14$$

$$\begin{array}{r} 448 \\ -\ 12.81 \\ \hline 435.19 \end{array}$$

12. **Simplify the following expression.**
निम्नलिखित व्यंजक को हल कीजिए।

$$3\frac{6}{7} - \left\{5\frac{1}{7} - \left(2\frac{3}{7} - \overline{3\frac{5}{7} - 4}\right)\right\}$$

a) $\frac{34}{7}$ b) $\frac{20}{7}$ c) $\frac{44}{7}$ d) $\frac{10}{7}$

$3\frac{6}{7} - 5\frac{1}{7} + 2\frac{3}{7} + \frac{2}{7}$

$= \frac{10}{7}$

$+2\frac{3}{7}$

$-1+\frac{5}{7}$

$-\frac{2}{7}$

SSC CHSL, 1 June 2021 S2

13. Simplify: $\frac{6}{5} \div \frac{6}{5}\ of\ \frac{6}{5} \times \frac{5}{6} + \frac{9}{4} \div \frac{4}{5}\ of\ \frac{15}{2} - \{8\frac{5}{9} + \left(\frac{4}{3} + \frac{5}{3} of \frac{6}{25}\right)\}$

$\frac{6}{5} \div \frac{6}{5}\ of\ \frac{6}{5} \times \frac{5}{6} + \frac{9}{4} \div \frac{4}{5}\ of\ \frac{15}{2} - \{8\frac{5}{9} + \left(\frac{4}{3} + \frac{5}{3} of \frac{6}{25}\right)\}$ का मान ज्ञात कीजिए|

a) $-9\frac{9}{40}$ b) $-9\frac{79}{360}$ c) $-8\frac{281}{360}$ d) $-9\frac{7}{120}$

$\frac{6}{5} \times \frac{5}{6} \times \frac{5}{6} \times \frac{5}{6} + \frac{9}{4} \times \frac{5}{4} \times \frac{2}{15} - \left\{8\frac{5}{9} + \left(\frac{4}{3} + \frac{5}{3} \times \frac{6}{25}\right)\right\}$

$= \frac{25}{36} + \frac{3}{8} - 8 - \frac{5}{9} - \frac{4}{3} - \frac{2}{5}$

$= -8 + \frac{250 + 135 - 200 - 480 - 144}{360}$

$+385 - 824 = -439$

$= -8 - \frac{439}{360}$

$= -8 - 1 - \frac{79}{360} = -9\frac{79}{360}$

SSC CHSL, 6 June 2022 S3

14. The value of $\left(1\frac{1}{3} \div 2\frac{6}{7} \text{ of } 5\frac{3}{5}\right) \times \left(6\frac{2}{5} \div 4\frac{1}{2} \text{ of } 5\frac{1}{3}\right) \div \left(\frac{3}{4} \times 2\frac{2}{3} \div \left(\frac{5}{9} \text{ of } 1\frac{1}{5}\right)\right) = k$, where K lies between:

$\left(1\frac{1}{3} \div 2\frac{6}{7} \text{ of } 5\frac{3}{5}\right) \times \left(6\frac{2}{5} \div 4\frac{1}{2} \text{ of } 5\frac{1}{3}\right) \div \left(\frac{3}{4} \times 2\frac{2}{3} \div \frac{5}{9} \text{ of } 1\frac{1}{5}\right) = k$ है, जहाँ k का मान _____ के मध्य स्थित है|

a) 0.0007 and 0.0008

b) 0.007 and 0.008

c) 0.07 and 0.08

d) 0.7 and 0.8

$\frac{4}{3} \times \frac{7}{20} \times \frac{5}{28} \times \frac{32}{5} \times \frac{2}{9} \times \frac{3}{16} \times \frac{4}{3} \times \frac{3}{8} \times \frac{5}{9} \times \frac{6}{5}$

$\frac{1000}{135 \times 1000}$

$135\overline{)1000}$ .007...

945

.08...

700

83×100

664

$\frac{7}{83} = .08$

$-\left(\left[\frac{3}{4} + 2\frac{2}{3} \div \left(\frac{5}{9} + 1\frac{1}{5}\right)\right]\right)$

$$\frac{\frac{13}{4}-\frac{2}{3}}{\frac{13}{3}\times 5-\left(\frac{3}{10}+21+\frac{2}{10}\right)}$$

$\frac{65}{3}$

$21+\frac{2}{3}-21-\frac{1}{2}$

15. The least number to be added to the expression $\frac{3\frac{1}{4}-\frac{4}{5}of\frac{5}{6}}{4\frac{1}{3}\div\frac{1}{5}-\left(\frac{3}{10}+21\frac{1}{5}\right)}$ to make it a perfect square.

$\frac{3\frac{1}{4}-\frac{4}{5}of\frac{5}{6}}{4\frac{1}{3}\div\frac{1}{5}-\left(\frac{3}{10}+21\frac{1}{5}\right)}$ में कौनसी छोटी से छोटी संख्या जोड़ी जाए ताकि वह एक पूर्ण वर्ग बन जाए?

a) $\frac{1}{2}$ b) $\frac{5}{6}$ c) $\frac{1}{4}$ d) $\frac{3}{10}$

$15\frac{1}{2}$

15 $\xrightarrow{+\frac{1}{2}}$ 16

$\frac{31\times 6}{12\times 2}=\frac{31}{2}=15\frac{1}{2}$

16. Which of the following options has the greatest value?

निम्नलिखित में से किस विकल्प का मान सबसे बड़ा है?

-ve ~~a)~~ $(-18) - 45 + (-3 - 2)$

-ve ~~b)~~ $(-99) + (-44) - 12$

+ve ~~c)~~ $20 + 4 + (-8) - 2 + 3 + 6$

-ve d) $4(-22 + (-4 - 7))$

17. Simplify: सरल करें:

$2[8p + 5\{n - 2(n - \overline{n + p}) + 4p\}]$

a) $6p + 10n$ b) $7p + 6n$

c) $76p + 10n$ d) $10p + 10n$

$n - n - p$

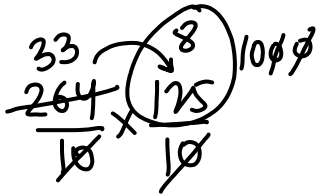
$n + 2p + 4p$

$= n + 6p$

$2[8p + 5n + 30p]$

$= 2[38p + 5n]$

SSC CHSL, 3 June 2022 S3



18. The value of $26.4 \times 12.5 + \sqrt{22^2 + 20 + 11^2} - 31$ is:

$26.4 \times 12.5 + \sqrt{22^2 + 20 + 11^2} - 31$ का मान ज्ञात कीजिए|

a) 384 b) 284 c) 18 d) 324

330 + 25 − 31

− 6

= 324

484

20

121

625

5×5×2×2

5×2=10

25×4=100

5×5×5 125×8=1000

2×2×2