doubtnut
India's Number 1 Education App

MATHS

BOOKS - RD SHARMA MATHS (HINGLISH)

RATIONAL NUMBERS

Maths

1. Add $\frac{3}{5}$ and $\frac{13}{5}$

A. a

B. b

C. c

D. d

Answer: answer

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Others

1. $Add \frac{7}{9} and \frac{-12}{9}$

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2. $Add \frac{-5}{9}\ and \frac{-17}{9}$ ،

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3. $Add \frac{4}{-11}\ and \frac{7}{11}$

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4. Add $\frac{5}{12}$ and $\frac{3}{8}$

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5. Add $\frac{7}{9}$ and 4

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6. Add $\frac{3}{8}$ and $\frac{-5}{12}$

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7. Simplify: $\frac{8}{-15} + \frac{4}{-3}$

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8. Simplify: $\frac{7}{-26} + \frac{16}{39}$

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9. Add the rational number : $\frac{-5}{7}$ and $\frac{3}{7}$

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10. Add the rational number $\frac{-15}{4}$ $and \frac{7}{4}$

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11. Add the rational number: $\frac{-8}{11}$ and $\frac{-4}{11}$

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12. Add the rational number : $\frac{6}{13}$ and $\frac{-9}{13}$

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13. Add the rational numbers:

(i) $\frac{3}{4}$ and $\frac{-5}{8}$

(ii) $\frac{5}{-9}$ and $\frac{7}{3}$

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14. Add the rational numbers: (i) $-\frac{3}{1}$ and $\frac{3}{5}$ (ii) $\frac{-7}{27}$ and $\frac{11}{18}$

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15. Add the rational numbers: (i) $\frac{31}{-4}$ and $\frac{-5}{8}$ (ii) $\frac{5}{36}$ and $\frac{-7}{12}$

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16. Add the rational numbers:

(i) $\frac{-5}{16}$ and $\frac{7}{24}$

(ii) $\frac{7}{-18}$ and $\frac{8}{27}$

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17. Simplify: $\frac{8}{9} + \frac{-11}{6}$

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18. Simplify: $3 + \frac{5}{-7}$

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19. Simplify: $\frac{1}{-12} + \frac{2}{-15}$

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20. Simplify: $\frac{-8}{19} + \frac{-4}{57}$

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21. Simplify: $\frac{7}{9} + \frac{3}{-4}$

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22. Simplify: $\frac{5}{26} + \frac{11}{-39}$

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23. Simplify: $\frac{-16}{9} + \frac{-5}{12}$

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24. Simplify: $\frac{-13}{8} + \frac{5}{36}$

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25. Simplify: $0 + \frac{-3}{5}$

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26. Simplify: $1 + \frac{-4}{5}$

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27. Add and express the sum as a mixed fraction:

$\frac{-12}{5}$ and $\frac{43}{10}$ (ii) $\frac{24}{7}$ and $\frac{-11}{4}$

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28. Add and express the sum as a mixed fraction:

$\frac{-31}{6} and \frac{-27}{8}$ (ii) $\frac{101}{6} and \frac{7}{8}$

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29. Simplify: $\frac{4}{3} + \frac{3}{5} + \frac{-2}{3} + \frac{-11}{5}$.

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30. Simplify: $\frac{3}{8} + \frac{7}{2} + \frac{-3}{5} + \frac{9}{8} + \frac{-3}{2} + \frac{6}{5}$

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31. Simplify:

$$\frac{-3}{10}+\frac{7}{15}+\frac{3}{-20}+\frac{-9}{10}+\frac{13}{15}+\frac{13}{-20}$$

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32. Write the additive inverse of each of the following rational numbers:

(i) $\frac{4}{9}$

(ii) $\frac{-13}{7}$

(iii) $\frac{5}{-11}$

(iv) $\frac{-11}{-14}$

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33. Verify: $\left(\frac{a}{b}+\frac{c}{d}\right)+\frac{e}{f}=\frac{a}{b}+\left(\frac{c}{d}+\frac{e}{f}\right)f$ or $\frac{a}{b}=\frac{-2}{3}, \frac{c}{d}=\frac{5}{7}$ and $\frac{e}{f}=\frac{-1}{6}$.

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34. Using commutativity and associativity of addition of ration of numbers, express each of the following as a rational number:

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

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35. Using commutativity and associativity of addition of ration of numbers, express each of the following as a rational number:

$$\frac{4}{3}+\frac{-4}{5}+\frac{-2}{3}+\frac{7}{5}-2$$

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36. Re- arrange suitably and find the sum:

$$\frac{5}{3}+\frac{11}{2}+\frac{-9}{4}+\frac{-8}{3}+\frac{-7}{2}$$

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37. Re- arrange suitably and find the sum:

$$\frac{-4}{7}+\frac{7}{6}+\frac{2}{7}+3+\frac{-11}{6}$$

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38. Verify commutativity of addition of rational numbers for each of the following pairs of rational number :

(i) $\frac{-11}{5} and \frac{4}{7}$

(ii) $\frac{4}{9} and \frac{7}{-12}$

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39. Verify commutativity of addition of rational numbers for each of the following pairs of rational number :

(i) $\frac{-3}{5}$ and $\frac{-2}{-15}$

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40. Verify commutativity of addition of rational numbers for each of the following pairs of rational number :

(i) 4 and $\frac{-3}{5}$

(ii) -4 and $\frac{4}{-7}$

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41. Verify associativity of addition of rational i.e.,

$(x+y)+z=x+(y+z)$, when:

(i)$x=\frac{1}{2}, y=\frac{2}{3}, z=-\frac{1}{5}$

(ii)$x=\frac{-2}{5}, y=\frac{4}{3}, z=\frac{-7}{10}$

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42. Verify associativity of addition of rational i.e.,

$(x+y)+z=x+(y+z)$, when:

(i)$x = \frac{-7}{11}, y = \frac{2}{-5}, z = \frac{-3}{22}$

(ii)$x = -2, y = \frac{3}{5}, z = \frac{-4}{3}$

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43. Write the additive inverse of each of the following rational numbers:

(i)$\frac{-2}{17}$

(ii) $\frac{3}{-11}$

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44. Write the additive inverse of each of the following rational numbers:

(i) $\frac{-17}{5}$

(ii) $\frac{-11}{-25}$

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45. Write the negative (additive inverse) of each of the following :

(i) $\frac{-2}{17}$

(ii) $\frac{7}{-9}$

(iii) $\frac{-16}{13}$

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46. Write the negative (additive inverse) of each of the following :

(i) $\frac{-5}{1}$

(ii) 0

(iii) 1

(iv) -1

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47. Using commutativity and associativity of addition of rational numbers, express each of the following as a rational number:

(i) $\frac{2}{5}+\frac{7}{3}+\frac{-4}{5}+\frac{-1}{3}$

(ii) $\frac{3}{7}+\frac{-4}{9}+\frac{-11}{7}+\frac{7}{9}$

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48. Using commutativity and associativity of addition of rational numbers, express each of the following as a rational number:

(i) $\frac{2}{5}+\frac{8}{3}+\frac{-11}{15}+\frac{4}{5}+\frac{-2}{3}$

(ii) $\frac{4}{7}+0+\frac{-8}{9}+\frac{-13}{7}+\frac{17}{21}$

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49. Re-arrange suitably and find the sum in each of the following:

(i) $\frac{11}{12}+\frac{-17}{3}+\frac{11}{2}+\frac{-25}{2}$

(ii) $\frac{-6}{7}+\frac{-5}{6}+\frac{-4}{9}+\frac{-15}{7}$

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50. Re-arrange suitably and find the sum in each of the following:

(i) $\frac{3}{5}+\frac{7}{3}+\frac{9}{5}+\frac{-13}{15}+\frac{-7}{3}$

(ii) $\frac{4}{13}+\frac{-5}{8}+\frac{-8}{13}+\frac{9}{13}$

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51. Re-arrange suitably and find the sum in each of the following:

(i) $\frac{2}{3}+\frac{-4}{5}+\frac{1}{3}+\frac{2}{5}$

(ii) $\frac{1}{8}+\frac{5}{12}+\frac{2}{7}+\frac{7}{12}+\frac{9}{7}+\frac{-5}{16}$

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52. Subtract $\frac{3}{4}$ from $\frac{5}{6}$.

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53. Subtract $\frac{-3}{8}$ from $\frac{-5}{7}$

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54. Subtract $\frac{-3}{5}$ from $\frac{9}{10}$.

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55. The sum of two rational numbers is $\frac{-3}{5}$. If one of the number is $\frac{-9}{20}$, find the other.

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56. What number should be added to $\frac{-5}{8}$ so as to get $\frac{5}{9}$?

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57. What should be subtracted from $\frac{-3}{4}$ so as to get $\frac{5}{6}$?

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58. Subtract the first rational number from the second in each of the following :

(i) $\frac{3}{8}, \frac{5}{8}$

(ii) $\frac{-7}{9}, \frac{4}{9}$

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59. Subtract the first rational number from the second in each of the following : $\frac{-2}{11}, \frac{-9}{11}$ (ii) $\frac{11}{13}, \frac{-4}{13}$

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60. Subtract the first rational number from the second in each of the following : (i) $\frac{1}{4}, \frac{-3}{8}$ (ii) $\frac{-2}{3}, \frac{5}{6}$

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61. Subtract the first rational number from the second in each of the following : $\frac{-6}{7}, \frac{-13}{14}$ (ii) $\frac{-8}{33}, \frac{-7}{22}$

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62. Evaluate each of the following: (i) $\frac{2}{3} - \frac{3}{5}$ (ii) $\frac{4}{7} - \frac{2}{-3}$ (iii) $\frac{4}{7} - \frac{-5}{-7}$

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63. Evaluate each of the following: (i) $-2-\frac{5}{9}$ (ii) $\frac{-3}{-8}-\frac{-2}{7}$ (iii) $\frac{-4}{13}-\frac{-5}{26}$

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64. Evaluate each of the following: (i) $\frac{-5}{14}-\frac{2}{7}$ (ii) $\frac{13}{15}-\frac{12}{25}$ (iii) $\frac{-6}{13}-\frac{-7}{13}$

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65. Evaluate each of the following: (i) $\frac{7}{24}-\frac{19}{36}$ (ii) $\frac{5}{63}-\frac{-8}{21}$

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66. The sum of the two numbers is $\frac{5}{9}$. If one of the numbers is $\frac{1}{3}$, Find the other.

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67. The sum of two numbers is $\frac{-1}{3}$. If one of the numbers is $\frac{-12}{3}$, Find the other.

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68. The sum of two numbers is $\frac{-4}{3}$. If one of the numbers is -5, find the other.

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69. The sum of two rational numbers is -8. If one of the numbers is $\frac{-15}{7}$, find the other.

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70. What number should be added to $\frac{-7}{8}$ so as to get $\frac{5}{9}$?

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71. What should be added to $\frac{-5}{11}$ so as to get $\frac{26}{33}$?

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72. What number should be added to $\frac{-5}{7}$ to get $\frac{-2}{3}$?

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73. What number should be subtracted from $\frac{-5}{3}$ to get $\frac{5}{6}$?

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74. What number should be subtracted from $\frac{3}{7}$ to get $\frac{5}{4}$?

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75. What should be added to $\left(\frac{2}{3}+\frac{3}{5}\right)$ to get $\frac{-2}{15}$?

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76. What should be added to $\left(\frac{1}{2}+\frac{1}{3}+\frac{1}{5}\right)$ to get 3 ?

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77. What should be subtracted from $\left(\frac{3}{4}-\frac{2}{3}\right)$ to get $\frac{-1}{6}$?

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78. Fill in the blanks : (i) $\frac{-4}{13} - \frac{-3}{26} = \ldots$ (ii) $\frac{-9}{14} + \quad = -1$ (iii) $\frac{-7}{9} + \quad = 3$ (iv) $\ldots\ldots\ldots + \frac{15}{23} = 4$

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79. Find: $\frac{3}{7} + \left(-\frac{6}{11}\right) + \frac{8}{21} + \left(\frac{-5}{22}\right)$

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80. Find : $\frac{-7}{4} + \frac{5}{3} + \frac{-5}{6} + \frac{1}{3} + \frac{-1}{2}$

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81. Evaluate : $\frac{-12}{5}+\frac{-7}{20}+\frac{3}{14}+\frac{1}{7}+\frac{-1}{10}$

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82. Find :

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

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83. Evaluate : $\frac{6}{7}-2+\frac{-7}{9}+\frac{19}{21}$

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84. Simplify : $\frac{-2}{3}+\frac{5}{9}-\frac{-7}{6}$ (ii) $\frac{5}{12}+\frac{-5}{18}-\frac{7}{24}$ gdg

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85. Simplify each of the following and write as a rational number of the form $\frac{p}{q}$: $\frac{3}{4}+\frac{5}{6}+\frac{-7}{8}$ (ii) $\frac{2}{3}+\frac{-5}{6}+\frac{-7}{9}$

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86. Simplify each of the following and write as a rational number of the form $\frac{p}{q}$:

$\frac{-11}{2}+\frac{7}{6}+\frac{-5}{8}$ (ii) $\frac{-4}{5}+\frac{-7}{10}+\frac{-8}{15}$

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87. Simplify each of the following and write as a rational number of the form $\frac{p}{q}$:

$\frac{-9}{10}+\frac{22}{15}+\frac{13}{-20}$ (ii) $\frac{5}{3}+\frac{3}{2}+\frac{-7}{3}+3$

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88. Express each of the following as a rational number of the form $\frac{p}{q}$:

(ii) $\frac{-8}{3}+\frac{-1}{4}+\frac{-11}{6}+\frac{3}{8}-3$

$\frac{6}{7}+1+\frac{-7}{9}+\frac{19}{21}+\frac{-12}{7}$

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89. Express each of the following as a rational number of the form $\frac{p}{q}$:

(i) $\frac{15}{2}+\frac{9}{8}+\frac{-11}{3}+6+\frac{-7}{6}$

(ii) $\frac{-7}{4}+0+\frac{-9}{5}+\frac{19}{10}+\frac{11}{14}$

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90. Express each of the rational number of the form $\frac{p}{q}$: $-\frac{7}{4}+\frac{5}{3}+\frac{-1}{2}+\frac{-5}{6}+2$

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91. Simplify: (i) $\frac{-3}{2}+\frac{5}{4}-\frac{7}{4}$ (ii) $\frac{5}{3}-\frac{7}{6}+\frac{-2}{3}$

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92. Simplify: $\frac{5}{4} - \frac{7}{6} - \frac{-2}{3}$ (ii) $\frac{-2}{5} - \frac{-3}{10} - \frac{-4}{7}$

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93. Simplify: (i) $\frac{5}{6} + \frac{-2}{5} - \frac{-2}{15}$ (ii) $\frac{3}{8} - \frac{-2}{9} + \frac{-5}{36}$

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94. Multiply : (i) $\frac{3}{4} by \frac{5}{7}$ (ii) $\frac{3}{7} by \left(\frac{-4}{5}\right)$ (iii) $\left(\frac{-5}{9}\right) by\ 4$ (iv) $\left(\frac{-36}{7}\right) by \left(-\frac{28}{9}\right)$

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95. Simplify : (i) $\frac{-8}{7} \times \frac{14}{5}$ (ii) $\frac{13}{6} \times \frac{-18}{91}$ (iii) $\frac{-5}{9} \times \frac{72}{-125}$ (iv) $\frac{-22}{9} \times \frac{-51}{-88}$

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96. Simplify : $\left(\frac{-16}{5} \times \frac{20}{8}\right) - \left(\frac{15}{5} \times \frac{-35}{3}\right)$

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97. Simplify :

$$\left(\frac{-3}{2} \times \frac{4}{5}\right) + \left(\frac{9}{5} \times \frac{-10}{3}\right) - \left(\frac{1}{2} \times \frac{3}{4}\right)$$

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98. Simplify :

$$\left(\frac{-7}{18} \times \frac{15}{-7}\right) - \left(1 \times \frac{1}{4}\right) + \left(\frac{1}{2} \times \frac{1}{4}\right)$$

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99. Multiply: $\frac{7}{11} by \frac{5}{4}$ (ii) $\frac{5}{7} by \frac{-3}{4}$

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100. Multiply: $\frac{-2}{9} by \frac{5}{11}$ (ii) $\frac{-3}{17} by \frac{-5}{-4}$

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101. Multiply: $\frac{9}{-7} by \frac{36}{-11}$ (ii) $\frac{-11}{13} by \frac{-21}{7}$

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102. Multiply: $-\frac{3}{5} by -\frac{4}{7}$ (ii) $-\frac{15}{11} by\ 7$

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103. Multiply: $\frac{-5}{17} by \frac{51}{-60}$ (ii) $\frac{-6}{11} by \frac{-55}{36}$

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104. Multiply: $\frac{-8}{25} by \frac{-5}{16}$ (ii) $\frac{6}{7} by \frac{-49}{36}$

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105. Multiply: $\frac{8}{-9} by \frac{-7}{-16}$ (ii) $\frac{-8}{9} by \frac{3}{64}$

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106. Simplify each of the following and express the result as a rational number in standard from:

$\frac{-16}{21} \times \frac{14}{5}$ (ii) $\frac{7}{6} \times \frac{-3}{28}$

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107. Simplify each of the following and express the result as a rational number in standard form:

$\frac{-19}{36} \times 16$ (ii) $\frac{-13}{9} \times \frac{27}{-26}$

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108. Simplify each of the following and express the result as a rational number in standard form:

$\frac{-9}{16} \times \frac{-64}{-27}$ (ii) $\frac{-50}{7} \times \frac{14}{3}$

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109. Simplify each of the following and express the result as a rational number in standard form:

(i) $\frac{-11}{9} \times \frac{-81}{-88}$

(ii) $\frac{-5}{9} \times \frac{72}{-25}$

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110. Simplify :

$$\left(\frac{25}{8} \times \frac{2}{5}\right) - \left(\frac{3}{5} \times \frac{-10}{9}\right)$$

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111. Simplify :

$$\left(\frac{1}{2} \times \frac{1}{4}\right) + \left(\frac{1}{2} \times 6\right)$$

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112. Simplify : $\left(-5 \times \frac{2}{15}\right)\left(6 \times \frac{2}{9}\right)$

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113. Simplify : $\left(\frac{-9}{4} \times \frac{5}{3}\right) + \left(\frac{13}{2} \times \frac{5}{6}\right)$

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114. Simplify : $\left(\frac{-4}{3} \times \frac{12}{-5}\right) + \left(\frac{3}{7} \times \frac{21}{15}\right)$

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115. Simplify : $\left(\frac{13}{5} \times \frac{8}{3}\right) - \left(\frac{-5}{2} \times \frac{11}{3}\right)$

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116. Simplify : $\left(\frac{13}{7} \times \frac{11}{26}\right) - \left(\frac{-4}{3} \times \frac{5}{6}\right)$

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117. Simplify : $\left(\frac{8}{5} \times \frac{-3}{2}\right) + \left(\frac{-3}{10} \times \frac{11}{16}\right)$

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118. Simplify:

$$\left(\frac{3}{2} \times \frac{1}{6}\right) + \left(\frac{5}{3} \times \frac{7}{2}\right) - \left(\frac{13}{8} \times \frac{4}{3}\right)$$

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119. Simplify:

$$\left(\frac{1}{4} \times \frac{2}{7}\right) - \left(\frac{5}{14} \times \frac{-2}{3}\right) + \left(\frac{3}{7} \times \frac{9}{2}\right)$$

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120. Simplify:

$$\left(\frac{13}{9} \times \frac{-15}{2}\right) + \left(\frac{7}{3} \times \frac{8}{5}\right) + \left(\frac{3}{5} \times \frac{1}{2}\right)$$

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121. Simplify:

$$\left(\frac{3}{11} \times \frac{5}{6}\right) - \left(\frac{9}{12} \times \frac{4}{3}\right) + \left(\frac{5}{13} \times \frac{6}{15}\right)$$

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122. Simplify:

$$\frac{-3}{5} \times \left(-\frac{10}{9}\right) \times \left(\frac{21}{-4}\right) \times (-6)$$

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123. simplify :

$$\frac{3}{11} \times \frac{-5}{6} \times \left(-\frac{22}{9}\right) \times \left(-\frac{9}{5}\right)$$

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124. Write the reciprocal of each of the following rational number:

(i)7

(ii) -11

(iii) $\frac{2}{5}$

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125. Write the reciprocal of each of the following rational number:

(i) $\frac{-7}{15}$

(ii) $\frac{5}{-12}$

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126. Find the reciprocal of

(i) $\frac{2}{5} \times \frac{4}{9}$

(ii) $\frac{-3}{8} \times \frac{-7}{13}$

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127. Verify the property: $x \times y = y \times x$ by taking:

(i)$x = \frac{-1}{3}, y = \frac{2}{7}$

(ii) $x = \frac{-3}{5}, y = \frac{-11}{13}$

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128. Verify the property: $x \text{ x } y = y \text{ x } x$` by taking:

(i)$x = 2, y = \frac{7}{-8}$

(ii) $x = 0, y = \frac{-15}{8}$

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129. Verify the property:

$(x \times y) \times z = x \times (y \times z)$ by taking:

(i) $x = \frac{7}{3}, y = \frac{12}{5}, z = \frac{4}{9}$

(ii)$x = 0, y = \frac{-3}{5}, z = \frac{-9}{4}$

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130. Verity the property:

$x \text{ x } (y \backslash \text{ x } z) = (x \text{ x} \backslash \ \ y) x \ z \ by \ tak \in g:$

(i)$x = \frac{1}{2}, y = \frac{5}{-4}, z = \frac{-7}{5}$

(ii)$x = \frac{5}{7}, y = \frac{-12}{13}, z = \frac{-7}{18}$

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131. Verity the property:

$x \text{ x } (y+z) = x \text{ x } y + x \text{ x } z \; by \; tak \in g:$

(i)$x = \frac{-3}{7}, y = \frac{12}{13}, z = \frac{-5}{6}$

(ii)$x = \frac{-12}{5}, y = \frac{-15}{4}, z = \frac{8}{3}$

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132. Verity the property:

$x \text{ x } (y+z) = x \text{ x } y + x \text{ x } z \; by \; tak \in g:$

(i) $x = \frac{-8}{3}, y = \frac{5}{6}, z = \frac{-13}{12}$

(ii)$x = \frac{-3}{4}, y = \frac{-5}{2}, z = \frac{7}{6}$

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133. Use the distributibity of multiplication of rational numbers over their addition to simplify:

(i) $\frac{3}{5} \times \left(\frac{35}{24} + \frac{10}{1}\right)$

(ii) $\frac{-5}{4} \times \left(\frac{8}{5} + \frac{16}{5}\right)$

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134. Use the distributibity of multiplication of rational numbers over their addition to simplify:

(i) $\frac{2}{7} \times \left(\frac{7}{16} - \frac{21}{4}\right)$

(ii) $\frac{3}{4} \times \left(\frac{8}{9} - \frac{40}{1}\right)$

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135. Find the multiplicative inverse (reciprocal) of each of the following rational numbers:

(i) 9

(ii) -7

(iii) $\frac{12}{5}$

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136. Find the multiplicative inverse (reciprocal) Of each of the following rational numbers:

(i) $\frac{-7}{9}$

(ii) $\frac{-3}{-5}$

(iii) $\frac{2}{3} \times \frac{9}{4}$

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137. Find the multiplicative inverse (reciprocal) Of each of the following rational numbers: (i) $\frac{-5}{8} \times \frac{16}{15}$

(ii) $-2 \times \frac{-3}{5}$

(iii) -1

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138. Find the multiplicative inverse (reciprocal) of each of the following rationalnumbers: (i) $\frac{0}{3}$

(ii) 1

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139. Name the property of multiplication of rational number illustrated by the statement: $\frac{-5}{16} \times \frac{8}{15} = \frac{8}{15} \times \frac{-5}{16}$

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140. Name the property of multiplication of rational number illustrated by the statement: $\frac{-17}{5} \times 9 = 9 \times \frac{-17}{5}$

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141. Name the property of multiplication of rational number illustrated by the statement: $\frac{7}{4} \times \left(\frac{-8}{3} + \frac{-13}{12}\right) = \frac{7}{4} \times \frac{-8}{3} + \frac{7}{4} \times \frac{-13}{12}$

$\Rightarrow a \times (b + c) = a \times b + a \times c$

It shows Distributive property.

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142. Name the property of multiplication of rational number illustrated by the statement:

$$\frac{-5}{9} \times \left(\frac{4}{15} \times \frac{-9}{8}\right) = \left(\frac{-5}{9} \times \frac{4}{15}\right) \times \frac{-9}{8}$$

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143. Name the property of multiplication of rational number illustrated by the statement:

$$\frac{13}{-17} \times 1 = 1 \times \frac{13}{-17}$$

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144. Name the property of multiplication of rational number illustrated by the statement: $\frac{-11}{16} \times \frac{16}{-11} = 1$

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145. Name the property of multiplication of rational number illustrated by the statement: $\frac{2}{13} \times 0 = 0 = 0 \times \frac{2}{13}$

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146. Name the property of multiplication of rational number illustrated by the statement:

$$\frac{-3}{2} \times \frac{5}{4} + \frac{-3}{2} \times \frac{-7}{6} = \frac{-3}{2} \times \left(\frac{5}{4} + \frac{-7}{6}\right)$$

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147. Fill in the blanks :

(i)The product of two positive rational number is always ...

(ii)The product of a positive rational number and a negative rational number is always ...

(iii)The product of two negative rational numbers

is always...

(iv)The reciprocal of a positive rational number is ...

(v)The reciprocal of a negative rational number is...

(vi)Zero has .. reciprocal .

(vii)The product of rational number and its reciprocal is ...

(viii)The numbers ... and .. are their own reciprocal

(ix)If a is reciprocal of b, then the reciprocal of b is ...

(x)The number 0 is... the reciprocal of any number.

(xi)Reciprocal of $\frac{1}{a}, a \neq 0 \, is \cdots$...

(xii)$(17 \times 12)^{-1} = 17^{-1} \times \ldots$

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148. Fill in the blanks :

(i)$-4 \times \frac{7}{9} = \frac{7}{9} \times \ldots$

(ii) $\frac{5}{11} \times \frac{-3}{8} = \frac{-3}{8} \times \ldots$

(iii) $\frac{1}{2} \times \left(\frac{3}{4} + \frac{-5}{12}\right) = \frac{1}{2} \times \ldots + \ldots \times \frac{-5}{12}$

(iv)

$$\frac{-4}{5} \times \left(\frac{5}{7} + \frac{-8}{9}\right) = \left(\frac{-4}{5} \times \ldots\right) + \frac{-4}{5} \times \frac{-8}{9}$$

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149. Divide : (i) $\frac{3}{5} by \frac{4}{25}$ (ii) $\frac{-8}{9} by \frac{4}{3}$ (iii) $\frac{-16}{21} by \frac{-4}{3}$ (iv) $\frac{8}{13} by \frac{3}{-26}$

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150. The product of two rational numbers is $\frac{-28}{81}$. If one of the number is $\frac{14}{27}$, find the other.

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151. By what number should we multiply $\frac{3}{-14}$, so that the product may be $\frac{5}{12}$.

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152. Divide : (i)$1 by \frac{1}{2}$ (ii) $5 by \frac{-5}{7}$ (iii) $\frac{-3}{4} by \frac{9}{-16}$

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153. Divide : (i)$\frac{-7}{8} by \frac{-21}{16}$ (ii) $\frac{7}{-4} by \frac{63}{64}$ (iii) $0\ by \frac{-7}{5}$

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154. Divide :

(i) $\frac{-3}{4} by -6$

(ii) $\frac{2}{3} by \frac{-7}{12}$

(iii) $-4\ by \frac{-3}{5}$

(iv) $\frac{-3}{13} by \frac{-4}{65}$

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155. Find the value and express as a rational number in standard form :

(i) $\frac{2}{5} + \frac{26}{15}$ (ii) $\frac{10}{3} + \frac{-35}{12}$ (iii) $-6 + \left(\frac{-8}{17}\right)$

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156. Find the value and express as a rational number in standard form : $\frac{-40}{99}+(-20)$ (ii) $\frac{-22}{27}+\frac{-100}{18}$ (iii) $\frac{-36}{125}+\frac{-3}{75}$

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157. The product of two rational number is 15. If one of the numbers is 10 , find the other.

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158. The product of two rational number is $\frac{-8}{9}$. If one of the number is $\frac{-4}{15}$, find the other.

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159. By what number should we multiply $\frac{-1}{6}$ so that the product may be $\frac{-23}{9}$?

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160. By what number should we multiply $\frac{-15}{28}$ so that the product may be $\frac{-5}{7}$?

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161. By what number should we multiply $\frac{-8}{13}$ so that the product may be 24?

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162. By what number should $\frac{-3}{4}$ be multiplied in order to produce $\frac{2}{3}$?

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163. Find $(x+y)+(x-y)$, if (i) $x=\frac{2}{3}, y=\frac{3}{2}$ (ii) $x=\frac{2}{5}, y=\frac{1}{2}$

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164. Find $(x+y)+(x-y)$, if $x=\frac{5}{4}, y=\frac{-1}{3}$ (ii) $x=\frac{2}{7}, y=\frac{4}{3}$ (iii) $x=\frac{1}{4}, y=\frac{3}{2}$

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165. The cost of $7\frac{2}{3}$ metres of rope is rs $12\frac{3}{4}$.

Find the cost of rope per metre.

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166. The cost of $2\frac{1}{3}$ metres of cloth is Rs $75\frac{1}{4}$.

Find its cost per metre.

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167. By what number should $\frac{-33}{16}$ be divided to get $\frac{-11}{4}$?

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168. Divide the sum of $\frac{-13}{5}$ $and \frac{12}{7}$ by the product of $\frac{-31}{7}$ $and \frac{-1}{2}$.

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169. Divide the sum of $\frac{65}{12} and \frac{12}{7}$ by their diference.

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170. If 24 trousers of equal size can be prepared in 54 metres of cloth, what length of cloth is required for each trouser ?

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171. Find four rational numbers between $\frac{2}{3} and \frac{4}{5}$.

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172. Find five rational numbers between $\frac{-3}{2} and \frac{5}{3}$.

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173. Find a rational number between -2 and 6.

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174. Find the rational number between $-\frac{2}{3} and \frac{1}{4}$.

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175. Find three rational numbers between -2 and 5.

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176. Find a rational number between – 3 and 1.

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177. Find any five rational numbers less than 2.

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178. Find two rational numbers between $\frac{-2}{9}$ $and \frac{5}{9}$.

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179. Find two rational numbers between $\frac{1}{5} and \frac{1}{2}$.

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180. Find ten rational numbers between $\frac{1}{4} and \frac{1}{2}$.

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181. Find ten rational numbers between $\frac{-2}{5} and \frac{1}{2}$.

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182. Find ten rational numbers between $\frac{3}{5}$ and $\frac{3}{4}$

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