



MATHS

BOOKS - RD SHARMA MATHS (ENGLISH)

RATIONAL NUMBERS

Others

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

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

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



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



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



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



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



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



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



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



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



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

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

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14. Add the rational numbers: (i) $\frac{3}{4}$ and $\frac{-5}{8}$ (ii) $\frac{5}{-9}$ and $\frac{7}{3}$

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

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



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17. Add the rational numbers: (i) $\frac{-5}{16}$ and $\frac{7}{24}$ (ii) $\frac{7}{-18}$ and $\frac{8}{27}$



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



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

A. $\frac{12}{7}$

B. $\frac{16}{5}$

C. $\frac{16}{7}$

D. $\frac{13}{7}$

Answer: C



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



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



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



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



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

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

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

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

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28. Add and express the sum as a mixed fraction: $-\frac{12}{5}$ and $\frac{43}{10}$ (ii)

$$\frac{24}{7} \text{ and } -\frac{11}{4}$$

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29. Add and express the sum as a mixed fraction: $-\frac{31}{6}$ and $-\frac{27}{8}$ (ii)

$$\frac{101}{6} \text{ and } \frac{7}{8}$$

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

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

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32. Simplify: $\frac{-3}{10} + \frac{7}{15} + \frac{3}{-20} + \frac{-9}{10} + \frac{13}{15} + \frac{13}{-20}$

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

$\frac{4}{9}$ (ii) $\frac{-13}{7}$ (iii) $\frac{5}{-11}$ (iv) $\frac{-11}{-14}$

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34.

Verify:

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

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35. Using commutativity and associativity of addition of rational 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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36. Using commutativity and associativity of addition of rational 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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37. 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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38. Re-arrange suitably and find the sum: $\frac{-4}{7} + \frac{7}{6} + \frac{2}{7} + 3 + \frac{-11}{6}$



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39. 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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40. Verify commutativity of addition of rational numbers for each of the following pairs of rational number : $\frac{-3}{5}$ and $\frac{-2}{-15}$ $\frac{2}{-7}$ and $\frac{12}{-35}$

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41. Verify commutativity of addition of rational numbers for each of the following pairs of rational number : 4 and $\frac{-3}{5}$ -4 and $\frac{4}{-7}$

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

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

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

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

$$\text{(i) } \frac{-2}{17} \quad \text{(ii) } \frac{3}{-11}$$

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

$$\frac{-17}{5} \quad \text{(ii) } \frac{-11}{-25}$$

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46. Write the negative (additive inverse) of each of the following : $\frac{-2}{17}$ (ii)

$\frac{7}{-9}$ (iii) $\frac{-16}{13}$

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47. Write the negative (additive inverse) of each of the following : $\frac{-5}{1}$ (ii)

0 (iii) 1 (iv) -1

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

$\frac{2}{5} + \frac{7}{3} + \frac{-4}{5} + \frac{-1}{3}$ (ii) $\frac{3}{7} + \frac{-4}{9} + \frac{-11}{7} + \frac{7}{9}$

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

$$\frac{2}{5} + \frac{8}{3} + \frac{-11}{15} + \frac{4}{5} + \frac{-2}{3} \quad \text{(ii)} \quad \frac{4}{7} + 0 + \frac{-8}{9} + \frac{-13}{7} + \frac{17}{21}$$



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

$$\frac{11}{12} + \frac{-17}{3} + \frac{11}{2} + \frac{-25}{2} \quad \text{(ii)} \quad \frac{-6}{7} + \frac{-5}{6} + \frac{-4}{9} + \frac{-15}{7}$$



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

$$\frac{3}{5} + \frac{7}{3} + \frac{9}{5} + \frac{-13}{15} + \frac{-7}{3} \quad \text{(ii)} \quad \frac{4}{13} + \frac{-5}{8} + \frac{-8}{13} + \frac{9}{13}$$



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

$$\frac{2}{3} + \frac{-4}{5} + \frac{1}{3} + \frac{2}{5} \quad \text{(ii)} \quad \frac{1}{8} + \frac{5}{12} + \frac{2}{7} + \frac{7}{12} + \frac{9}{7} + \frac{-5}{16}$$

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

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

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

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

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

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59. Subtract the first rational number from the second in each of the following : $\frac{3}{8}, \frac{5}{8}$ (ii) $\frac{-7}{9}, \frac{4}{9}$

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60. 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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61. Subtract the first rational number from the second in each of the

following : $\frac{1}{4}, \frac{-3}{8}$ (ii) $\frac{-2}{3}, \frac{5}{6}$



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



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

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

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67. 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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68. 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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69. The sum of two numbers is $\frac{-4}{3}$. If one of the numbers is -5 , find the other.



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



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



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



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



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



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



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

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

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

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

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

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

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

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



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



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



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87. Simplify each of the following and write as a rational number of the form $\frac{p}{q}$: (i) $\frac{-11}{2} + \frac{7}{6} + \frac{-5}{8}$ (ii) $\frac{-4}{5} + \frac{-7}{10} + \frac{-8}{15}$



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88. Simplify each of the following and write as a rational number of the

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

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

$\frac{-8}{3} + \frac{-1}{4} + \frac{-11}{6} + \frac{3}{8} - 3$ (ii) $\frac{6}{7} + 1 + \frac{-7}{9} + \frac{19}{21} + \frac{-12}{7}$

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

$\frac{15}{2} + \frac{9}{8} + \frac{-11}{3} + 6 + \frac{-7}{6}$ (ii) $\frac{-7}{4} + 0 + \frac{-9}{5} + \frac{19}{10} + \frac{11}{14}$

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91. Express each of the following as a 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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92. Simplify: $\frac{-3}{2} + \frac{5}{4} - \frac{7}{4}$ (ii) $\frac{5}{3} - \frac{7}{6} + \frac{-2}{3}$

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

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

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95. 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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96. 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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97. Simplify : $\left(\frac{-16}{5} \times \frac{20}{8}\right) - \left(\frac{15}{5} \times \frac{-35}{3}\right)$

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98. 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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99. 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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100. Multiply: $\frac{7}{11}by\frac{5}{4}$ (ii) $\frac{5}{7}by\frac{-3}{4}$

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

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

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103. Multiply: $-\frac{3}{5}by-\frac{4}{7}$ (ii) $-\frac{15}{11}by7$

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



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



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



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107. Simplify each of the following and express the result as a rational number in standard form: $\frac{-16}{21} \times \frac{14}{5}$ (ii) $\frac{7}{6} \times \frac{-3}{28}$



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108. 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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109. 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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110. Simplify each of the following and express the result as a rational

number in standard form: $\frac{-11}{9} \times \frac{-81}{-88}$ (ii) $\frac{-5}{9} \times \frac{72}{-25}$



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



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112. Simplify: $\left(\frac{1}{2} \times \frac{1}{4}\right) + \left(\frac{1}{2} \times 6\right)$

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

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

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

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

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

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

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119. 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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120. 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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121. 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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122. 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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123. Simplify: $\frac{-3}{5} \times \left(-\frac{10}{9}\right) \times \left(\frac{21}{-4}\right) \times (-6)$

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

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125. Write the reciprocal of each of the following rational number: 7 (ii)

– 11 (iii) $\frac{2}{5}$

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126. Write the reciprocal of each of the following rational number: (i) $\frac{-7}{15}$

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

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127. Find the reciprocal of (i) $\frac{2}{5} \times \frac{4}{9}$ (ii) $\frac{-3}{8} \times \frac{-7}{13}$

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128. Verify the property: $x \times y = y \times x$ by taking: $x = -\frac{1}{3}$, $y = \frac{2}{7}$ (ii)

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

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129. Verify the property: $x \times y = y \times x$ by taking: $x = 2, y = \frac{7}{-8}$ (ii)
 $x = 0, y = \frac{-15}{8}$

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130. Verify the property: $x \times (y \times z) = (x \times y) \times z$ by taking $\in g$: (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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131. Verify the property: $x \times (y \times z) = (x \times y) \times z$ $x=1/2, y=5/(-4), z=$
 $(-7)/5, x=5/7, y=(-12)/(13), z=(-7)/(18)$

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132. Verify the property: $x \times (y + z) = x \times y + x \times z$: (i)

$$x = \frac{-3}{7}, y = \frac{12}{13}, z = \frac{-5}{6} \quad \text{(ii) } x = \frac{-12}{5}, y = \frac{-15}{4}, z = \frac{8}{3}$$

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133. Verify the property: $x \times (y + z) = x \times y + x \times z$, (i) $x = (-8)/3, y = 5/6, z =$

$$(-13)/(12) \quad \text{(ii) } x = (-3)/4, y = (-5)/2, z = 7/6$$

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134. Use the distributivity 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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135. Use the distributivity of multiplication of rational numbers over their

addition to simplify: $\frac{2}{7} \times \left(\frac{7}{16} - \frac{21}{4} \right)$ (ii) $\frac{3}{4} \times \left(\frac{8}{9} - 40 \right)$



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136. Find the multiplicative inverse (reciprocal) Of each of the following rational numbers: (i) 9 (ii) -7 (iii) $\frac{12}{5}$



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137. 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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138. 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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139. Find the multiplicative inverse (reciprocal) Of each of the following rational numbers: (i) $\frac{0}{3}$ (ii) 1

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140. 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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141. 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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142. Name the property of multiplication of rational number illustrated by the statement: $\frac{7}{4} \times \left(\frac{-8}{3} + \frac{-13}{12} \right) = \frac{7}{4} \times \frac{-8}{3} + \frac{7}{4} \times \frac{-13}{12}$

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143. 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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144. Name the property of multiplication of rational number illustrated

by the statement:
$$\frac{13}{-17} \times 1 = \frac{13}{-17} = 1 \times \frac{13}{-17}$$

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145. Name the property of multiplication of rational number illustrated by

the statement:
$$\frac{-11}{16} \times \frac{16}{-11} = 1$$

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146. 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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147. 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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148. Fill in the blanks : The product of two positive rational number is always .. The product of a positive rational number and a negative rational number is always The product of two negative rational numbers is always The reciprocal of a positive rational number is The reciprocal of a negative rational number is Zero has reciprocal The product of rational number and its reciprocal is The numbers.... and are their own reciprocal If a is reciprocal of b, then the reciprocal

of b is The number 0 is the reciprocal of any number. Reciprocal of

$$\frac{1}{a}, a \neq 0 \text{ is.. } (17 \times 12)^{-1} = 17^{-1} \times 12^{-1}$$

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149. Fill in the blanks : (i) $-4 \times \frac{7}{9} = \frac{7}{9} \times \dots$ (ii) $\frac{5}{11} \times \frac{-3}{8} = \frac{-3}{8} \times \dots$

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

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

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150. Divide : (i) $\frac{3}{5} \text{ by } \frac{4}{25}$ (ii) $\frac{-8}{9} \text{ by } \frac{4}{3}$

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

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153. 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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154. 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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155. Divide : $\frac{-3}{4} by -6$ (ii) $\frac{2}{3} by \frac{-7}{12}$ $-4 by \frac{-3}{5}$ (iv) $\frac{-3}{13} by \frac{-4}{65}$

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

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

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

$$\frac{-40}{99} + (-20) \text{ (ii) } \frac{-22}{27} + \frac{-100}{18} \text{ (iii) } \frac{-36}{125} + \frac{-3}{75}$$

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

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



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



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



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

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

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165. 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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166. The cost of $7\frac{2}{3}$ metres of rope is rs $12\frac{3}{4}$. Find the cost of cloth per metre.

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

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

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171. 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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172. Represent $\frac{5}{3}$ and $-\frac{5}{3}$ on the number line.

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173. Represent $\frac{8}{5}$ and $-\frac{8}{5}$ on the number line.

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174. Write any three rational numbers between -2 and 0 .

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

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

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

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

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



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180. Find a rational number between -3 and 1 .



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181. Find any five rational numbers less than 2 .



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



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



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

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

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

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