MATHS

BOOKS - VGS PUBLICATION-BRILLIANT

REAL NUMBERS

Exercise

1. Can we represent all rational numbers pictorially ?

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

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3. Represent $\frac{-3}{4}$ on the number line.

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4. Right $0, 7, 10, -4$ in $\frac{p}{q}$ form.

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5. Guess my number: Your friend chooses An Integer between 0 and 100. You have to find out that number by asking questions, but your friend can only answer ‘Yes’ or ‘No’. What strategy Would you use?

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6. Are the following statements True ? Give reasons for your answers with an example :

Every rational number an integer.

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7. Are the following statements True ? Give reasons for your answers with an example: Every integer is a rational number.

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8. Are the following statements True ? Give reasons for your answers with an example:

Zero is a rational number.

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9. Find two rational numbers between 3 and 4 by mean method.

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10. Find any five rational numbers between 2 and 3 using mean method.

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11. Find any 10 rational numbers between $\frac{-3}{11}$ and $\frac{8}{11}$.

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12. Express $\frac{7}{16}, \frac{10}{7}$ and $\frac{2}{3}$ in decimal from.

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13. Express $\frac{1}{17}$ in decimal form.

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14. Express $\frac{1}{19}$ in decimal form.

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15. Express 3.28 in the form of $\frac{p}{q}$ (where p and q are intgers, $q \neq 0$).

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16. Express $1.\overline{62}$ in $\frac{p}{q}$ from where $q \neq 0, p, q$ are integers.

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17. Find the decimal values of the following:

$\frac{1}{2}$

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18. Find the decimal values of the following:

$$\frac{1}{2^2}$$

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19. Find the decimal values of the following:

$$\frac{1}{5}$$

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20. Find the decimal values of the following:

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

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21. Find the decimal values of the following:

$$\frac{3}{10}$$

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22. Find the decimal values of the following:

$\frac{27}{25}$

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23. (a) Write any three rational numbers

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24. (b) Explain rational number in your own words.

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25. Give one example each to the following statements.

i. A number which is rational but not an integer

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26. Give one example each to the following statements.

ii. A whole number which is not a natural number

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27. Give one example each to the following statements.

iii. An integer which is not a whole number

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28. Give one example each to the following statements.

iv. A number which is natural number, whole number, integer and rational number.

29. Give one example each to the following statements.

v. A number which is an integer but not a natural number.

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30. Find five rational numbers between 1 and 2.

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31. Insert three rational numbers between $\frac{3}{5}$ and $\frac{2}{3}$

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

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33. Express the following rational numbers in decimal form.

$$\frac{242}{1000}$$

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34. Express the following rational numbers in decimal form.

$$\frac{354}{500}$$

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35. Express the following rational numbers in decimal form.

$$\frac{2}{5}$$

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36. Express the following rational numbers in decimal form.

$$\frac{115}{4}$$

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37. Express the following rational numbers in decimal form.

$$\frac{2}{3}$$

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38. Express the following rational numbers in decimal form.

$$-\frac{25}{36}$$

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39. Express the following rational numbers in decimal form.

$$\frac{22}{7}$$

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40. Express the following rational numbers in decimal form.

$\frac{11}{9}$

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41. Express each of the following decimals in $\frac{p}{q}$ form where $q \neq 0$ and p, q are integers

0.36

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42. Express each of the following decimals in $\frac{p}{q}$ form where $q \neq 0$ and p, q are integers

15.4

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43. Express each of the following decimals in $\frac{p}{q}$ form where $q \neq 0$ and p, q are integers

10.25

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44. Express each of the following decimals in $\frac{p}{q}$ form where $q \neq 0$ and p, q are integers

3.25

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45. Express each of the following decimal numbers in $\frac{p}{q}$ form

$0.\bar{5}$

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46. Express each of the following decimal numbers in $\frac{p}{q}$ form

$3.\overline{8}$

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47. Express each of the following decimal numbers in $\frac{p}{q}$ form

$0.\overline{36}$

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48. Express each of the following decimals in $\frac{p}{q}$ form: $3.12\bar{7}$

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49. Without actually dividing find which of the following are terminating decimals.

$\frac{3}{25}$

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50. Without actually dividing find which of the following are terminating decimals.

$$\frac{11}{18}$$

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51. Without actually dividing find which of the following are terminating decimals.

$$\frac{13}{20}$$

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52. Without actually dividing find which of the following are terminating decimals.

$\frac{41}{42}$

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53. Kurthi said $\sqrt{2}$ can be written $\frac{\sqrt{2}}{1}$ which is in $\frac{p}{q}$ form. So $\sqrt{2}$ is a rational number. Do you agree with her argument?

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54. Find the value of $\sqrt{3}$ upto six decimals.

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55. Locate $\sqrt{2}$ on number line.

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56. Locate $\sqrt{3}$ on number line.

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57. Locate $\sqrt{5}$ and $-\sqrt{5}$ on number line. [Hint $5^2 = 2^2 + 1^2$]

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58. Find any two irrational numbers between $\frac{1}{5}$ and $\frac{2}{7}$

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59. Find any two irrational numbers between $\frac{1}{5}$ and $\frac{2}{7}$

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60. Write any two irrational numbers lying between 3 and 4.

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61. Examine, whether the following numbers are rational or irrational :

$(3+\sqrt{3})+(3-\sqrt{3})$

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62. Examine, whether the following numbers are rational or irrational :

$(3+\sqrt{3})(3-\sqrt{3})$

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63. Examine, whether the following numbers are rational or irrational: $\frac{10}{2\sqrt{5}}$

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64. Examine, whether the following numbers are rational or irrational :

$(\sqrt{2}+2)^2$

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65. Classify the following numbers as rational or irrational.

$\sqrt{27}$

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66. Classify the following numbers as rational or irrational.

$\sqrt{441}$

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67. Classify the following numbers as rational or irrational.

$30.2323342345\ldots$

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68. Classify the following numbers as rational or irrational.

$7.484848\ldots$

69. Classify the following numbers as rational or irrational: 11.2132435465

70. Classify the following numbers as rational or irrational.

$0.3030030003\ldots$

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71. Give four examples for rational and irrational numbers?

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72. Find an irrational number between $\frac{5}{7}$ and $\frac{7}{9}$. How many more there may be ?

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73. Find two irrational numbers between 0.7 and 0.77

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74. Find the value of $\sqrt{5}$ upto 3 decimal places.

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75. Find the value of $\sqrt{7}$ upto six decimal places by long division method.

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76. Locate $\sqrt{10}$ on the number line.

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77. Find atleast two irrational numbers between 2 and 3.

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78. State whether the following statements are true or false. Justify your answers.

(i) Every irrational number is a real number.

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79. State whether the following statements are true or false. Justify your answers.

(ii) Every rational number is a real number.

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80. State whether the following statements are true or false. Justify your answers.

(iii) Every real number need not be a rational number

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81. State whether the following statements are true or false. Justify your answers.

(iv) n is not irrational if n is a perfect square.

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82. State whether the following statements are true or false. Justify your answers: $\sqrt{n}$ is irrational if n is a perfect square

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83. State whether the following statements are true or false. Justify your answers.

(vi) All real numbers are irrational.

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84. Visualise the representation of $3.5\bar{8}$ on the number line through successive magnification upto 4 decimal places.

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85. Visualise 2.874 on the number line, using successive magnification.

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86. Visualise $5.\overline{28}$ on the number line, upto 3 decimal places.

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87. Hasith said "$5\sqrt{3}+2\sqrt{7}=7\sqrt{10}$". Do you agree with him?

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88. How can you find the value of $5\sqrt{2}-\sqrt{8}$.

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89. Check whether $5\sqrt{2}$ is irrational numbers or not ?

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90. Check whether $\frac{5}{\sqrt{2}}$ is irrational numbers or not?

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91. Check whether $21+\sqrt{3}$ is irrational numbers or not?

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92. Check whether $x + 3$ is irrational numbers or not?

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93. Subtract $5\sqrt{3} + 7\sqrt{5}$ from $3\sqrt{5} - 7\sqrt{3}$

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94. Multiply $6\sqrt{3}$ with $13\sqrt{3}$

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95. Simplify the following expressions :

$(3+\sqrt{3})(2+\sqrt{2})$

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96. Simplify the following expressions :

$(2+\sqrt{3})(2-\sqrt{3})$

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97. Simplify the following expressions :

$(\sqrt{5}+\sqrt{2})^2$

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98. Simplify the following expressions :

$(\sqrt{5}-\sqrt{2})(\sqrt{5}+\sqrt{2})$

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99. Find the square root of $5+2\sqrt{6}$

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100. Find rationalising factors of the denominators of $\frac{1}{2\sqrt{3}}$

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101. Find rationalising factors of the denominators of $\frac{3}{\sqrt{5}}$

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102. Find rationalising factors of the denominators of $\frac{1}{\sqrt{8}}$

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103. Rationalise the denominator of $\frac{1}{4+\sqrt{5}}$

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104. If $x = 7 + 4\sqrt{3}$ then find the value of $x + \frac{1}{x}$

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105. Simiplify $\frac{1}{7+4\sqrt{3}}+\frac{1}{2+\sqrt{5}}$

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106. Simplify

$2^{\frac{2}{3}}.2^{\frac{1}{3}}$

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107. Simplify

$$\left(5^{\frac{1}{7}}\right)^{4}$$

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108. $\frac{3^{1/5}}{3^{1/3}} =$

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109. Simplify

$$7^{\frac{1}{17}}.11^{\frac{1}{17}}$$

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110. Simplify :

$(16)^{\frac{1}{2}}$

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111. $(128)^{1/7}$ =

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112. Simplify :

$(343)^{\frac{1}{5}}$

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113. Write the following surds in exponential form

$\sqrt{2}$

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114. Write the following surds in exponential form

$\sqrt[3]{9}$

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115. Write the following surds in exponential form

$\sqrt[5]{20}$

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116. Write the following surds in exponential form

$\sqrt[17]{19}$

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117. Write the surds in radical form:

$5^{\frac{1}{7}}$

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118. Write the surds in radical form:

$17^{\frac{1}{6}}$

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119. Write the surds in radical form:

$5^{\frac{2}{3}}$

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120. Write the surds in radical form:

$142^{\frac{1}{2}}$

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121. Simplify the following expressions.

$(5+\sqrt{7})(2+\sqrt{5})$

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122. Simplify the following expressions.

$$(5+\sqrt{5})(5-\sqrt{5})$$

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123. Simplify the following expressions.

$$(\sqrt{3}+\sqrt{7})^2$$

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124. Simplify the following expressions.

$(\sqrt{11}+\sqrt{7})(\sqrt{11}-\sqrt{7})$

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125. Classify the following numbers as rational or irrational.

$5-\sqrt{3}$

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126. Classify the following numbers as rational or irrational.

$\sqrt{3}+\sqrt{2}$

Watch Video Solution

127. Classify the following numbers as rational or irrational.

$(\sqrt{2}-2)^2$

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128. Classify the following numbers as rational or irrational.

$$\frac{2\sqrt{7}}{7\sqrt{7}}$$

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129. Classify the following numbers as rational or irrational.

2π

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130. Classify the following numbers as rational or irrational.

$$\frac{1}{\sqrt{3}}$$

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131. Classify the following numbers as rational or irrational.

$$\left(2+\sqrt{2}\right)\left(2-\sqrt{2}\right)$$

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132. In the following equations, find whether variables x, y, z etc. represent rational or irrational numbers

$x^2 = 7$

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133. In the following equations, find whether variables x, y, z etc. represent rational or irrational numbers

$y^2 = 16$

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134. In the following equations, find whether variables x, y, z etc. represent rational or irrational numbers

$z^2 = 0.02$

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135. In the following equations, find whether variables x, y, z etc. represent rational or

irrational numbers

$$u^2 = \frac{17}{4}$$

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136. In the following equations, find whether variables x, y, z etc. represent rational or irrational numbers

$$w^2 = 27$$

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137. In the following equations, find whether variables x, y, z etc. represent rational or irrational numbers

$t^4 = 256$

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138. Every surd is an irrational, but every irrational need not be a surd. Justify your answer.

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139. Rationalise the denominators of the following: $\frac{1}{3+\sqrt{2}}$

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140. Rationalise the denominators of the following:

$$\frac{1}{\sqrt{7}-\sqrt{6}}$$

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141. Rationalise the denominators of the following:

$$\frac{1}{\sqrt{7}}$$

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142. Rationalise the denominators of the following:

$$\frac{\sqrt{6}}{\sqrt{3}-\sqrt{2}}$$

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143. Simplify each of the following by rationalising the denominator:

$$\frac{6-4\sqrt{2}}{6+4\sqrt{2}}$$

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144. Simplify each of the following by rationalising the denominator:

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

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145. Simplify each of the following by rationalising the denominator:

$$\frac{1}{3\sqrt{2}-2\sqrt{3}}$$

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146. Simplify each of the following by rationalising the denominator:

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

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147. Find the value of $\frac{\sqrt{10}-\sqrt{5}}{2\sqrt{2}}$ upto three decimal places. (take $\sqrt{2}=1.414$ and $\sqrt{5}=2.236$)

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148. Find:

$64^{\frac{1}{6}}$

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149. Find:

$32^{\frac{1}{5}}$

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150. Find:

$625^{\frac{1}{4}}$

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151. Find:

$16^{\frac{3}{2}}$

Watch Video Solution

152. Find:

$243^{\frac{2}{5}}$

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153. Find:

$(46656)^{\frac{-1}{6}}$

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154. Simplify : $\sqrt[4]{81} - 8\sqrt[3]{343} + 15\sqrt[5]{32} + \sqrt{225}$

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155. If 'a' and 'b' are rational numbers, find the value of a and b in each of the following

equations.

$$\frac{\sqrt{3}+\sqrt{2}}{\sqrt{3}-\sqrt{2}} = a + b\sqrt{6}$$

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156. If 'a' and 'b' are rational numbers, find the value of a and b in each of the following equations.

$$\frac{\sqrt{5}+\sqrt{3}}{2\sqrt{5}-3\sqrt{3}} = a - b\sqrt{15}$$

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157. Find the square root of $11 + 2\sqrt{30}$

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158. What is meant by a rational number?

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159. What meant by an irrational number ?

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160. Find a rational number between 2 and 3 by mean method.

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161. Express $\frac{27}{25}$ In decimal form.

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162. Express the following rational numbers in decimal form.

$-\frac{25}{36}$

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163. Express 8.625 in $\frac{p}{q}$ form

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164. Express the following rational numbers in decimal form.

$\frac{11}{9}$

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165. Write any four rational numbers.

166. Write any three Irrational numbers.

167. Find an irrational number between 4 and 5.

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168. Examine whether $(3+\sqrt{2})(3-\sqrt{2})$ is a rational or irrational number.

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169. Examine, whether $\frac{30}{3\sqrt{5}}$ is a rational or irrational number.

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170. Simplify the following expressions :

$(\sqrt{5}-\sqrt{2})(\sqrt{5}+\sqrt{2})$

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171. Rationalise the denominators of the following:

$$\frac{1}{\sqrt{7}-\sqrt{6}}$$

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172. Find:

$625^{\frac{1}{4}}$

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173. Find:

$243^{\frac{2}{5}}$

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174. Find two rational numbers between 5 and 6 by mean method.

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175. Express $1.\overline{46}$ in the $\frac{p}{q}$ form where$q \neq 0$, p, q are integers.

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176. Examine, whether the following statements are rational or irrational:

$(\sqrt{3}+1)^2$

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177. Examine, whether the following statements are rational or irrational:

$(5+\sqrt{2})(5-\sqrt{2})$

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178. Simplify: $\sqrt[4]{256} - \sqrt[3]{125} + \sqrt[5]{32}$

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179. Simplify: $\dfrac{\sqrt{3} - \sqrt{2}}{\sqrt{3} + \sqrt{2}}$

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180. Explain, how irrational nos. differ from rational nos.? Give four examples each.

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181. Rationalise the denominator of $\frac{5}{\sqrt{3}+\sqrt{2}}$

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182. $\frac{x^2-1}{x+1}=4$,then find the value of 'x'.

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183. If x=2, y =1 is a solution of the equation $2x+by=5$, find the value of 'b'.

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184. Write the formulae of area and volume of different solid shapes. Find out the variables and constants in them.

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185. What is the general form of the points which lie on X-axis ? Write any four points lie on X-axis.

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186. The opposite angles of a parallelogram are $(3x-2)^\circ$ and $(x+48)^\circ$.

Find the measure of each angle of the parallelogram.

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187. Factorise $8x^3+y^3+z^3-6xyz$, using identity.

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188. Locate $\sqrt{10}$ on the number line.

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189. State the obscissa and ordinate of the following points and describe the position of each point P(5,6).

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190. State the obscissa and ordinate of the following points and describe the position of each point Q(2,-5).

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191. Simplify : $\sqrt[3]{625} - 4\sqrt[3]{343} - 5\sqrt[4]{81} + 6\sqrt[5]{32}$

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192. Show that the figure formed by joining the midpoints of sides of a rhombus successively is a rectangle.

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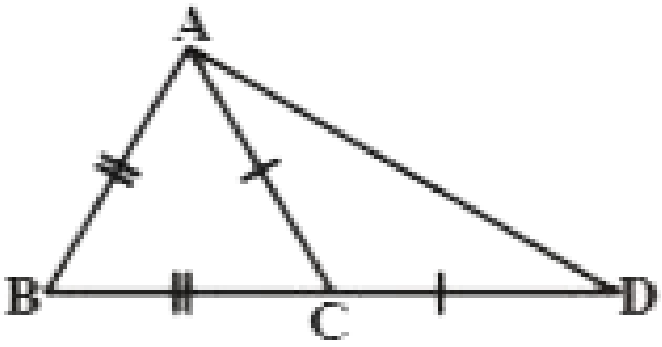
193. In the adjacent figure, $AB = BC$ and $AC = CD$. Prove that :

$\angle BAD : \angle ADB = 3 : 1.$



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194. Visualise the representation of $4.\overline{35}$ on the number line through successive magnification upto 4 decimal places.

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195. In a mixture of 28 litres, the ratio of milk and water is $5:2$, set up the equation be tween the mixture and milk. Draw its graph. By observing the graph, find the quantity of milk in the mixture.

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196. If $p^2+q^2+r^2=0$, show that $p^6+q^6+r^6=3p^2q^2r^2$

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197. Plot the points $A(2, 2), B(9, 2), C(8, 5)$ and $D(3, 5)$ in a graph sheet. Join all the points to make it a trapezium. Find Its area.

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198. $\sqrt{5 + 2\sqrt{6}}$=

A. $3 + \sqrt{2}$

B. $\sqrt{3} + \sqrt{2}$

C. $3 - \sqrt{2}$

D. $\sqrt{3}-\sqrt{2}$

Answer:

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199. The coefficients of 'x^2' and 'x' in the product of (2x -8), (7- 3x) is _____

A. 2,-10

B. 6,10

C. 3,-20

D. -6,38

Answer:

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200. Which of the following is not a solution of the equation $x + 2y = 6$?

A. (2,1)

B. (2,2)

C. (0,3)

D. (6,0)

Answer:

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201. Diagonals are perpendicular in _____

A. Square, Rectangle

B. Rectangle, Parallelogram

C. Square, Rhombus

D. Trapezium, Rhombus

Answer:

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202. Equation of a line parallel to y-axis is ____

A. x=8

B. x=0

C. y=0

D. y=3

Answer:

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203. In ΔABC, which of the following is incorrect ?

A. $AB + BC < AC$

B. $AB - AC > AC$

C. $BC + CA < AB$

D. $AB + BC > AC$

Answer:

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204. Which of the following point does not lie on the y-axis ?

A. (0,2)

B. (0,-3)

C. (-2,0)

D. (0,4)

Answer:

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205. The remainder when $2x^3 - 3x + 5$ is divided by (x-2).

A. 27

B. 22

C. 15

D. -15

Answer:

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206. Which of the following is not true ?

A. $(-2, -3) \rightarrow Q_3$

B. $(5, -10) \rightarrow Q_1$

C. $(-4, 5) \rightarrow Q_2$

D. $(2, -6) \rightarrow Q_4$

Answer:

Watch Video Solution

207. $1m^2$ = ____ cm^2.

A. 10000

B. 1000

C. 100

D. 10

Answer:

Watch Video Solution

208. A rational number equivalent to $\frac{-3}{4}$

A. $\frac{-4}{3}$

B. $\frac{-4}{5}$

C. $\frac{3}{4}$

D. $\frac{-6}{8}$

Answer:

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209. $\frac{-2}{3}$ lies on _____ on the number line.

A. right side of the zero

B. left side of the zero

C. zero

D. can't be determined

Answer:

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210. Which of the following is false?

A. Every rational number is a natural number

B. Every rational number is a whole number

C. Every rational number is an integer

D. Every integer is a rational number

Answer:

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211. A rational number between 5 and 6 is

A. $\frac{9}{2}$

B. $\frac{10}{2}$

C. $\frac{11}{2}$

D. $\frac{12}{2}$

Answer:

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212. $0.\overline{3}$ =

A. $\frac{3}{8}$

B. $\frac{2}{9}$

C. $\frac{3}{7}$

D. $\frac{1}{3}$

Answer:

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213. The decimal form of 1/18 is

A. $0.0\bar{5}$

B. $0.\overline{05}$

C. $0.\bar{5}$

D. 0.06

Answer:

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214. 1.25 in p/q form

A. $\frac{4}{5}$

B. $\frac{5}{4}$

C. $\frac{5}{6}$

D. $\frac{6}{5}$

Answer:

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215. If a and b are any two rational numbers then a rational number between a and b is

A. a+1

B. b-1

C. $\frac{a+b}{2}$

D. $a \cdot b$

Answer:

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216. If n is a natural number other than a perfect square then $\sqrt{n}$ is ____ number.

A. rational

B. irrational

C. natural

D. none

Answer:

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217. If 'x' is an irrational number then x + 2 is _____ number.

A. natural

B. rational

C. irrational

D. can't be determined

Answer:

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218. If 'x' is an irrational number then x - 3 is _____ number.

A. rational

B. natural

C. irrational

D. Complex

Answer:

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219. Number which can't be expressed in p/q form are _____ numbers.

A. irrational

B. rational

C. whole

D. natural

Answer:

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220. The combination of Q and S given the set of _____ numbers.

A. natural

B. integers

C. whole

D. real

Answer:

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221. $(2+\sqrt{2})(2-\sqrt{2})$ is a _____ number.

A. irrational

B. rational

C. can't be determined

D. none

Answer:

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222. $\sqrt{\frac{a}{b}}$ =

A. $\frac{\sqrt{a}}{b}$

B. $\frac{a}{\sqrt{b}}$

C. $\frac{\sqrt{a}}{\sqrt{b}}$

D. $\frac{a}{b}$

Answer:

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223. $\left(\sqrt{a}+b\right)\left(\sqrt{a}-b\right)$ =

A. a^2-b^2

B. a-b

C. a^2-b

D. $a-b^2$

Answer:

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224. $\left(\sqrt{2}+\sqrt{5}\right)^2$ =

A. 10

B. $7+2\sqrt{10}$

C. $7-2\sqrt{10}$

D. $2\sqrt{10}$

Answer:

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225. $(7+\sqrt{2})(7-\sqrt{2})$ =

A. 45

B. 5

C. 3

D. 47

Answer:

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226. The rationalising factor of $\frac{1}{5\sqrt{2}}$ is

A. $\frac{1}{5\sqrt{2}}$

B. $5\sqrt{2}$

C. $\sqrt{2}$

D. 5

Answer:

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227. The rationalising factor of $\frac{1}{\sqrt{27}}$ is

A. $\frac{1}{\sqrt{27}}$

B. $\sqrt{27}$

C. $\sqrt{3}$

D. 3

Answer:

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228. $\left(\frac{3}{4}\right)^{-3} \times \left(\frac{3}{4}\right)^{3} \times \left(\frac{3}{4}\right)^{6} =$ _____

A. $\left(\frac{3}{4}\right)^{-54}$

B. $\left(\frac{3}{4}\right)^{6}$

C. $\left(\frac{3}{4}\right)^{12}$

D. $\left(\frac{3}{4}\right)^{-6}$

Answer:

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229. $\sqrt[5]{32}$ =

A. 32^5

B. 2

C. $4\sqrt{2}$

D. $2\sqrt{2}$

Answer:

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230. $(128)^{1/7}$ =

A. 2

B. 4

C. 8

D. $8\sqrt{2}$

Answer:

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231. Radical form of $27^{1/5}$ is

A. $\sqrt{27}$

B. $\sqrt[3]{27}$

C. $\sqrt[4]{27}$

D. $\sqrt[5]{27}$

Answer:

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232. $a^{\frac{1}{n}} =$

A. $\sqrt[n]{a}$

B. a/n

C. na

D. n+a

Answer:

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233. The Rationalising factor of $\frac{1}{5-\sqrt{3}}$ is

A. $\left(5+\sqrt{3}\right)$

B. $\sqrt{3}-5$

C. $\frac{1}{5+\sqrt{3}}$

D. $\frac{1}{\sqrt{3}-5}$

Answer:

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234. $\sqrt[n]{a^m}$=

A. $a^{m/n}$

B. $a^{n/m}$

C. a^{mn}

D. a^{m-n}

Answer:

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235. If $x^3 = 10$, then x is

A. a rational number

B. an irrational number

C. a perfect number

D. an even number

Answer:

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236. If $p^3 = 216$, then p is

A. an odd number

B. an irrational number

C. a perfect number

D. a rational number

Answer:

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237. The radical form of $15^{2/3}$

A. $\sqrt[3]{30}$

B. $\sqrt[3]{15}$

C. $\sqrt[3]{225}$

D. $\sqrt[3]{45}$

Answer:

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238. The radical form of $6^{2/3}$

A. $\sqrt[3]{36}$

B. $\sqrt{36}$

C. $\sqrt{48}$

D. $\sqrt{216}$

Answer:

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239. The exponential form of $\sqrt[4]{81}$ is

A. $9^{1/4}$

B. $9^{2/4}$

C. $3^{1/4}$

D. $3^{1/8}$

Answer:

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240. The exponential form of $\sqrt[35]{105}$ is

A. $3^{1/35}$

B. $5^{1/35}$

C. $7^{1/35}$

D. $105^{1/35}$

Answer:

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241. $\left(\sqrt{a}+b\right)\left(\sqrt{a}-b\right)$ =

A. a^2-b^2

B. $a-b^2$

C. a-b

D. $a+b^2$

Answer:

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242. $\left(\sqrt{x}+y\right)^2=$

A. $x+y+2\sqrt{xy}$

B. $\sqrt{x}+y^2+2xy$

C. $x+y^2+2\sqrt{x}\cdot y$

D. $x^2+y^2+2\sqrt{x}\cdot y$

Answer:

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243. $\left(\sqrt{3}+\sqrt{2}\right)\left(\sqrt{3}-\sqrt{2}\right)$ =

A. 1

B. 0

C. 5

D. 13

Answer:

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244. $(-8)^{7/5} \times (-8)^{-4/5} \times (-8)^{-3/5}$=

A. 0

B. -8

C. 1

D. -512

Answer:

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245. The decimal form of $0.\overline{32}$ is

A. $\frac{32}{100}$

B. $\frac{32}{99}$

C. $\frac{32}{90}$

D. $\frac{32}{50}$

Answer:

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246. $\sqrt{9} \times \sqrt{16} =$

A. $\sqrt{25}$

B. $\frac{3}{4}$

C. 12

D. 144

Answer:

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247. $\sqrt{a} \div \sqrt{b}=$

A. $\sqrt{ab}$

B. $a\sqrt{b}$

C. $\sqrt{ab}$

D. $\sqrt{\frac{a}{b}}$

Answer:

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248. $\left(\frac{-2}{3}\right)^{2/7} \times \left(\frac{-2}{3}\right)^{5/7} =$

A. 1

B. $\frac{-2}{3}$

C. 0

D. $\left(\frac{-2}{3}\right)^{2/5}$

Answer:

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249. If $\sqrt{3} = 1.732$, then $\sqrt{27}$ =

A. 3×1.732

B. 9×1.732

C. 27×1.732

D. 6×1.732

Answer:

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250. Whose value is 11.18 if $\sqrt{5} = 2.236$?

A. $\sqrt{25}$

B. $\sqrt{75}$

C. $\sqrt{125}$

D. $\sqrt{250}$

Answer:

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251. The decimal value of $\frac{22}{7}$ is

A. 3.421

B. 3.142

C. 3.412

D. 3.124

Answer:

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252. If $\sqrt{10} = 3.162$, then $\sqrt{40}$=

A. 6.324

B. 9.486

C. 12.648

D. 31.62

Answer:

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253. $\sqrt[5]{32}^{-2}$=

A. 2

B. 4

C. 6

D. $1/2$

Answer:

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254. Rationalising factor of $\sqrt{5}+\sqrt{6}$ is

A. $\sqrt{5}-6$

B. $5-\sqrt{6}$

C. $\sqrt{5}-\sqrt{6}$

D. $5+\sqrt{6}$

Answer:

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255. Express 3.25 in the form of p/q

A. $\frac{13}{4}$

B. $\frac{65}{2}$

C. $\frac{13}{40}$

D. $\frac{13}{20}$

Answer:

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256. If $a^n = b$, then $\sqrt[n]{b}$=

A. n

B. a

C. $b^{1/n}$

D. $a^{1/n}$

Answer:

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257. $\frac{3^{1/5}}{3^{1/3}} =$

A. $3^{1/15}$

B. $3^{2/15}$

C. $3^{-2/15}$

D. $3^{8/15}$

Answer:

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258. The collection of negative numbers and whole numbers is denoted by

A. Q

B. W

C. Z or I

D. N

Answer:

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259. If a and b are any two rational numbers then a rational number between a and b is

A. a-b

B. b-a

C. $\sqrt{ab}$

D. $\frac{a+b}{2}$

Answer:

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260. $\frac{2}{3}$ =

A. $0.\overline{6}$

B. 0.66

C. 0.666

D. 0.6

Answer:

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261. The decimal value of $\frac{1}{2^3}$ is

A. 0.5

B. 0.25

C. 0.125

D. 1.125

Answer:

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262. π is

A. a natural number

B. an irrational number

C. a rational number

D. none of these

Answer:

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263. Find the area of rectangle whose length is 4.7 an and breadth is 2 cm.

A. $\sqrt{3}-1$

B. $(\sqrt{3}+\sqrt{2})$

C. $(\sqrt{3}-\sqrt{2})$

D. lb

Answer:

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264. $\sqrt{5}$ lies between

A. 1 and 2

B. 2 and 3

C. 3 and 4

D. 0 and 1

Answer:

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265. A Rectangular park dimensions are $(3+\sqrt{2})$ and $(2+\sqrt{2})$ units then the area of that park in square unit.

A. $8+5\sqrt{2}$

B. $5+2\sqrt{2}$

C. $13\sqrt{2}$

D. $5+\sqrt{2}$

Answer:

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266. The value of 1.999___ in the form of $\frac{p}{q}$ (p, q are integers, $q \neq 0$)

A. $\frac{1999}{1000}$

B. 2

C. $\frac{1}{9}$

D. $\frac{19}{10}$

Answer:

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267. If 'x' is a positive real number and $x^2 = 2$ then the value of x^3 is

A. $2\sqrt{2}$

B. $3\sqrt{2}$

C. 4

D. 1,2,4,3

Answer:

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268. If $\sqrt{10} = 3.162$, then the value of $\frac{1}{\sqrt{10}}$ is

A. 31.62

B. 3.162

C. 0.3162

D. 316.2

Answer:

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269. If $x=\frac{\sqrt{3}+\sqrt{2}}{\sqrt{3}-\sqrt{2}}$ then the value of x+y is

A. 5

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

C. 10

D. $5-2\sqrt{6}$

Answer:

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