



MATHS

NCERT - NCERT MATHS(TELUGU)

PLAYING WITH NUMBERS

Exercise

1. Is 7224 divisible by 6? Why?



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2. Give two examples of 4 digit, numbers which are divisible by 6.

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3. Can you give an example of a number which is divisible by 6 but not by 2 and 3. Why?

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4. Are 953, 9534, 900, 452 divisible by 2? Also check by actual division?

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5. Check whether the number is divisible by 3? 45986

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6. Check whether the number is divisible by 3? 36129

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7. Check whether the number is divisible by 3? 7874

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8. Test whether 9846 is divisible by 9?

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9. Without actual division, find whether 8998794 is divisible by 9?

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10. Check whether 777 is divisible by both 3 and 9?

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11. Check whether 312792 is divisible by 3, by 3 and by 6?

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12. Check whether 321729 is divisible by 3 and by 6?

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13. Check whether 197232 is divisible by 3 and by 6?

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14. Check whether 972132 is divisible by 3 and by 6?

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15. Check whether 1790184 is divisible by 3 and by 6?

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16. Check whether 312792 is divisible by 3, by 3 and by 6?

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17. Check whether 800552 is divisible by 3 and by 6?

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18. Check whether 4335 is divisible by 3 and by 6?

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19. Check whether 726352 is divisible by 3 and by 6?



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20. Determine which of the following numbers are divisible by 5 and by 10. 25, 125, 250, 1250, 10205, 70985, 45880 Check whether the numbers that are divisible by 10 are also divisible by 2 and 5.



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21. Fill the table using divisibility test for 3 and 9.

Number	Sum of the digits in the number	Divisible by	
		3	9
72		
197		
4689		
79875		
988974	$9 + 8 + 8 + 9 + 7 + 4 = 45$	Yes	Yes

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22. Make 3 different 3 digit numbers using 1, 9 and 8 where each digit can be used only once. Check which of these numbers is divisible by 9

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23. Which numbers among 2, 3, 5, 6, 9 divides 12345 exactly?

Write 12345 in reverse order and test now which numbers divide it exactly?

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24. Write different 2 digit numbers using digits 3, 4 and 5.

Check whether these numbers are divisible by 2, 3, 5, 6 and 9?

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25. Write the smallest digit and the greatest possible digit

in the blank space of each of the following numbers so that

the number formed is divisible by 3: ...6724,

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26. Write the smallest digit and the greatest possible digit in the blank space of each of the following numbers so that the number formed is divisible by 3.4765....2,

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27. Write the smallest digit and the greatest possible digit in the blank space of each of the following numbers so that the number formed is divisible by 3: 7221....5

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28. Find the smallest number that must be added to 123, so that it becomes exactly divisible by 5?

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29. Find the smallest number that has to be subtracted from 256, so that it becomes exactly divisible by 10 ?

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30. Find the smallest number that has to be subtracted from 256, so that it becomes exactly divisible by 10 ?

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31. Find the factors of 80.



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32. Do all the factors of a given number divide the number exactly? Find the factors of 28 and verify by division.



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33. 3 is a factor of 15 and 24. Is 3 is a factor of their difference also?



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34. What is the smallest prime number?



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35. What is the smallest composite number?



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36. What is the smallest odd composite number?



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37. Give 5 odd and 5 even composite numbers?



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38. Is 1 prime or composite and why?

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39. Can you guess a prime number which when on reverseing its digits, gives another prime number? (Hint : Take a 2 digit prime number)

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40. You know 311 is a prime number, Can you find the other two prime numbers just by rearranging the digits?

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41. From the following numbers identify different pairs of co-primes. 2, 3, 4, 5, 6, 7, 8, 9 and 10

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42. Write all the factors of the following numbers. 36,

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43. Write all the factors of the following numbers 23

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44. Write all the factors of the following numbers 96

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45. Write all the factors of the following numbers 115

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46. Which of the following pairs are co-prime? (i) 18 and 35,
(ii) 216 and 215

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47. Which of the following pairs are co-prime? (i) 30 and 415, (ii) 17 and 68

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48. What is the greatest prime number between 1 and 20?

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49. Find the prime and composite numbers between 10 and 30?

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50. The numbers 17 and 71 are prime numbers. Both these numbers have same digits 1 and 7. Find 2 more such pairs of prime numbers below 100?

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51. Write three pairs of twin primes below 20?

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52. Write two prime numbers whose product is 35?

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53. Express 36 as the sum of two odd primes.

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54. Write seven consecutive composite numbers less than 100.

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55. Express 53 as the sum of three primes?

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56. Write two prime numbers whose difference is 10?



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57. Write three pairs of prime numbers less than 20 whose sum is divisible by 5?



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58. Write the prime factors of 28 and 36 through division method.



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59. Write the prime factors of 42 by factor three method.



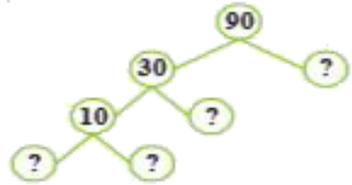
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60. Write the missing numbers in the factor tree for 90?

i.



ii.



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61. Factorise 84 by division method?

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62. Write the greatest 4 digit number and express it in the form of its prime factors?





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63. I am the smallest number, having four different prime factors. Can you find me?



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64. Find the HCF of 12, 16 and 28.



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65. Find the HCF of 28, 35 and 49.



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66. What is the HCF of any two. i) Consecutive numbers?, ii) Consecutive even numbers?, iii) Consecutive odd numbers?

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67. Find the HCF of the number by prime factorisation and continued division method? 32, 64, 96, 128

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68. Find the largest number which is a factor of each of the numbers 504, 792 and 1080.

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69. The length, breadth and height of a room are 12 m, 15 m, and 18 m respectively. Determine the longest tape which can measure all the three dimensions of the room exactly?

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70. HCF of co-prime numbers 4 and 15 was found as follows by factorisation: $4 = 2 \times 2$ and $15 = 3 \times 5$. Since there is no common prime factor, HCF of 4 and 15 is 0. Is the answer correct? If not, what is the correct HCF?

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71. Find the LCM of: 3, 4,

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72. Find the LCM of.10, 11

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73. Find the LCM of. 5, 6, 7,

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74. Find the LCM of. 10, 30

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75. Find the LCM of. 4, 12, 24,



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76. Find the LCM of. 3, 12



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77. When will the LCM of two or more numbers be their own product?



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78. Find the LCM of the following numbers by prime factorisation method. 26, 14 and 91

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79. Find the LCM of the following numbers by prime factorisation method. 12 and 15,

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80. Find the LCM of the following numbers by prime factorisation method. 15 and 25,

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81. Find the LCM of the following numbers by prime factorisation method. 14 and 21,

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82. Find the LCM of the following numbers by prime factorisation method. 18 and 27,

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83. Find the LCM of the following numbers by prime factorisation method. 48, 56 and 72,

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84. Find the LCM of the following numbers by prime factorisation method. 26, 14 and 91

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85. Find the LCM of the following numbers by division method. 45, 99, 132, 165

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86. Find the LCM of the following numbers by division method. 84, 112, 196,

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87. Find the LCM of the following numbers by division method. 102, 119, 153,

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88. Find the LCM of the following numbers by division method. 45, 99, 132, 165

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89. Find the smallest number added to 5 is exactly divisible by 12, 14 and 18.

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90. Find the greatest 3 digit number which when divided by 75, 45 and 60 leaves: i) no remainder, ii) the remainder 4 in each case.

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91. Three measuring tapes are 64 cm, 72 cm and 96 cm. What is the least length that can be measured by any of the tapes exactly?

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92. What is the capacity of the largest vessel which can empty the oil from three vessels containing 32 litres, 24 litres and 48 litres an exact number of times ?



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93. Prasad and Raju met in the market on 1st of this month. Prasad goes to the market every 3rd day and Raju goes every 4th day. On what day of the month will they meet again?



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94. What is the LCM and HCF of TWINPRIME numbers?



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95. Find the LCM and HCF of the following number? 15,24
,Check their relationship

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96. Find the LCM and HCF of the following number 8, 25,
Check their relationship

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97. Find the LCM and HCF of the following number 12, 48
,Check their relationship

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98. If the LCM of two numbers is 290 and their product is 7250 what will be its HCF?

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99. The product of two numbers is 3276. If their HCF is 6, find their LCM?

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100. The HCF of two numbers is 6 and their LCM is 36. If one of the numbers is 12, find the other?

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101. Is 100000 divisible by 4? Why?



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102. Give an example of a 2 digit number that is divisible by 2 but not divisible by 4?



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103. Is 76104 divisible by 8?



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104. Write the numbers that are divisible by 8 & lie between 100 and 200?

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105. 1221 is a polydrome number, which on reversing their digits gives the same number. Thus, every polydrome number with even number of digits, is always divisible by 11. Write a polydrome number of 6 digits.

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106. Test whether 572 is divisible by 4?

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107. Test whether 21,084 is divisible by 4?

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108. Test whether 14,560 is divisible by 4?

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109. Test whether 1,700 is divisible by 4?

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110. Test whether 2150 is divisible by 4?



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111. Test whether 9774 is divisible by 4?



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112. Test whether 5,31,048 is divisible by 4?



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113. Test whether 5500 is divisible by 4?



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114. Test whether 6136 is divisible by 4?



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115. Test whether 4152 is divisible by 4?



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116. Check whether the following numbers are divisible by

11? 859484



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117. Verify whether the number 2104 is divisible by 4 and 8?



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118. Verify whether the number 726352 is divisible by 4 and 8?



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119. Verify whether the number 1800 is divisible by 4 and 8?



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120. Find the smallest number that must be added to 289279, so that it is divisible by 8?



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121. Find the smallest number that can be subtracted from 1965, so that it becomes divisible by 4?

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122. Write all the possible numbers between 1000 and 1100, that are divisible by 11?

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123. Write the nearest number to 1240 which is divisible by 11?

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124. Write the nearest number to 105 which is divisible by 4?

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125. Check whether the number is divisible by 6 using divisibility rule? 37812

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126. Check whether the number is divisible by 6 using divisibility rule? 56394

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127. Write the smallest and the greatest possible digit in the blank space of each of the following numbers. So that the number formed is divisible by 3. i) $483\dots5$, ii) $\dots7236$

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128. Write all the factors of 54 and 98

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129. Write the prime and composite numbers between 50 and 70?

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130. Express the followings as the sum of three odd primes.

i) 41, ii) 83



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131. Find the largest number which is a factor of each of the numbers: 72, 108, 216.



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132. The three bells ring at 12'O clock every day. The 1st bell rings for every 15 min, 2nd bell rings for every 25 min, 3rd

bell rings for every 40 min. At what time will all the bells ring again?

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133. The LCM of two numbers 36 and 48 is 144. Find their HCF and verify your answer?

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134. Verify whether 74736 is divisible by 8?

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135. Verify whether 100364 is divisible by 11?



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136. Fill in the blanks : If a number is divisible by 2 and 3 then it is divisible by _____



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137. Fill in the blanks : _____ is the smallest of all factors.



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138. Fill in the blanks : _____ is neither a composite nor prime number.



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139. Fill in the blanks : The number of factors of a given number 12 is _____



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140. Fill in the blanks : 123321 is an example of _____ number.



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141. Check whether numbers divisible by 6 are also divisible by 2 and 3.



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142. Check whether the numbers divisible by 10 are also divisible by 2 and 5?

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143. Write the greatest number that must be subtracted from 379, so that it divides by 5?

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144. Write the prime numbers between 100 and 120.

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145. You know 431 is a prime number, can you find the other two prime numbers just by rearranging the digits?

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146. Express 96 as the sum of 3 prime numbers ?

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147. Find the smallest number, having four different prime factors?

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148. Find the smallest 3 digit number which when divided by 36, 42, 54 leaves the remainder 5?

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149. Verify whether 73548 is divisible by 4?

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150. Verify whether 83568 is divisible by 11?

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151. Write the factors 78?



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152. Identify different co-primes between 50 and 70.



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153. Find the prime factorisation of 72 by drawing a factor tree?



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154. Find the HCF of 28, 42, 63 by prime factorisation method?



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155. Find the HCF of 45, 60, 75 by continued division method.

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156. Find LCM of the numbers 18, 24, 36 by prime factorisation method?

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157. Find the LCM of the numbers 25, 30, 50 by the division method?

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158. If the LCM and HCF of two numbers is 144 and 12. One of the number is 48. Find the other number and verify your answer.

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159. The product of two numbers is 2028. Their LCM is 156. Find the HCF.

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160. Find the polydrome number of 9 digits and check whether it is divisible by 11?



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161. Fill in the blanks, so that the number is divisible by 6 is
 53_2 .

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162. Fill in the blanks, so that the number is divisible by 6 is
 94_3 .

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163. Is 98793 is divisible by 9. Veffy without actual division.

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164. Are all the numbers divisible by 5 are divisible by 10?

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165. Check whether the following pair of numbers are co-primes (Relatively primes). a) 17, 21, b) 8, 18, c) 29, 37, d) 9, 33

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166. Write pairs of twin primes between 40 and 80?

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167. Write the common multiples of 12, 9?



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168. What is the GCD of two consecutive numbers? Give example?



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169. If 2_739 is divisible by 3. What is the digit in place of blank.



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170. Is 7 is a common factor of 28, 42, 63.



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171. What is the number that divides 403, 434 and 465 without leaving any remainder?



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172. Ramu has 12 coins with him. How could he arrange his coins in different ways?



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173. Express 77, 91 as product of two primes.

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174. Express 111, 95 as sum of three prime numbers.

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175. Write pairs of prime numbers whose difference is 100?

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176. Verify whether 82672 is divisible by 8?

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