

MATHS

BOOKS - BEYOND PUBLICATION

SETS

Example

1. List the teeth of the Incisors

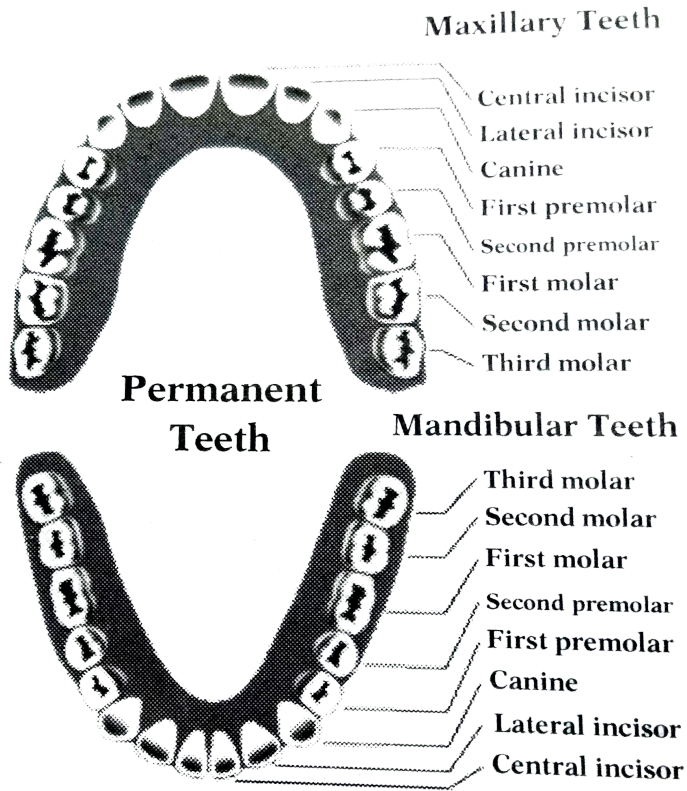


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2. List the teeth of the Canines



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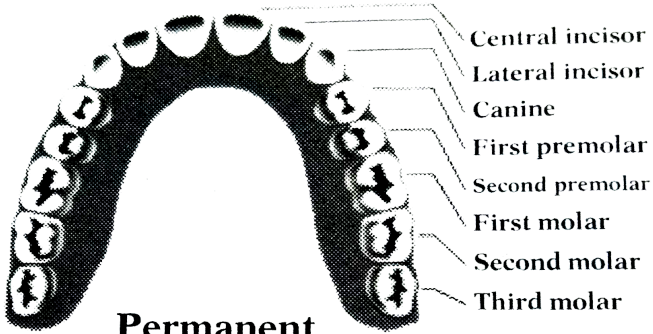
3.

List the teeth under each of the following type

Pre-molars

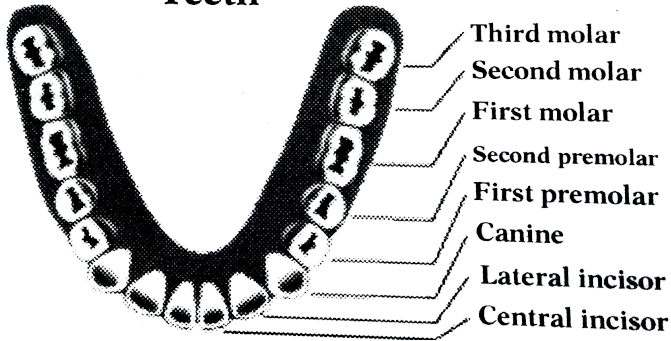
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Maxillary Teeth



Permanent Teeth

Mandibular Teeth



4.

List the teeth under each of the following type
molars



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5. Identify and write the common property" of the following collections.

2,4,6,8,.....



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6. Identify and write the common property" of the following collections.

2,3,5,7,11,.....



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7. Identify and write the common property" of the following collections.

1,4,9,16,....



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8. Identify and write the common property" of the following collections.

January, February, March, April.....



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9. Identify and write the common property" of the following collections.

Thumb,index finger, middle finger, ring finger, little finger



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10. Write the following sets:

Set of the first five positive integers.



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11. Write the following sets:

Set of multiple of 5 which are more than 100
and less than 125.



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12. Write the following sets:

Set of first five cubic numbers.



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13. Write the following sets:

Set of digits in the Ramanujan number.



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14. Some numbers are given below. Decide the number of which number sets they belong to and does not belong to and express with correct symbols.

1



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15. Some numbers are given below. Decide the numbers to which number sets they belong to and does not belong to and express with correct symbols.

0



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16. Some numbers are given below. Decide the numbers to which number sets they belong to and does not belong to and express with

correct symbols.

-4



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17. Some numbers are given below. Decide the numbers to which number sets they belong to and does not belong to and express with correct symbols.

$$\frac{5}{6}$$



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18. Some numbers are given below. Decide the numbers to which number sets they belong to and does not belong to and express with correct symbols.

1. $\bar{3}$



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19. Some numbers are give below. Decide the numbers to which numbers sets they belong to and does not belong to and express with

correct symbols.

$$\sqrt{2}$$



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20. Some numbers are given below. Decide the number of which number sets they belong to and does not belong to and express with correct symbols.

$$\log 21$$



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21. Some numbers are given below. Decide the numbers to which number sets they belong to and does not belong to and express with correct symbols.

0.03



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22. Some numbers are given below. Decide the numbers to which number sets they belong to and does not belong to and express with

correct symbols.

π



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23. Some numbers are given below. Decide the numbers to which number sets they belong to and does not belong to and express with correct symbols.

$$\sqrt{-4}$$



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24. List the elements of the following sets.

$G = \{\text{all the factors of } 20\}$



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25. List the elements of the following sets.

$F = \{\text{the multiples of } 4 \text{ between } 17 \text{ and } 61 \text{ which are divisible by } 7\}$



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26. List the elements of the following sets.

$S = \{x: x \text{ is a letter in a word 'MADAM'}\}$



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27. List the elements of the following sets.

$P = \{x: x \text{ is a whole number between } 3.5 \text{ and } 6.7\}$



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28. Write the following sets in the roster form.

B is the set of all months in a year having 30 days.



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29. Write the following sets in the roster form.

P is the set of all prime numbers smaller than 10.



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30. Write the following sets in the roster form.

X is the set of the colours of the rainbow.



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31. A is the set of factors of 12. Which one of the following is not a member of A?



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32. A is the set of factors of 12. Which one of the following is not a member of A?



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33. A is the set of factors of 12. Which one of the following is not a member of A?



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34. A is the set of factors of 12. Which one of the following is not a member of A?



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35. Observe the following collections and, prepare as many generalized statements as possible by describing their properties: 2, 4, 6, 8, ...



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36. Observe the following collections and prepare as many as generalized statements you can describing their move properties.

1,4,9,16.....



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37. Can you write set of rational numbers listing elements in it?



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38. Write some sets of your choice, involving algebraic and geometrical ideas.



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39. Which of the following are sets? Justify your answer.

The collection of all months of a year beginning with the letter "J"



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40. Which of the following are sets? Justify your answer.

The collection of ten most talented writers of India.



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41. Which of the following are sets? Justify your answer.

A team of eleven best cricket batsmen of the world.





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42. Which of the following are sets? Justify your answer.

The collection of all boys in your class.



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43. Which of the following are sets? Justify your answer.

The collection of all even integers.



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44. IF $A=\{0,2,4,6\}$, $B=\{3,5,7\}$ and $C=\{p,q,r\}$ the fill the appropriate symbol , \in or \notin in the blanks.

0.....A



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45. IF $A=\{0,2,4,6\}$, $B=\{3,5,7\}$ and $C=\{p,q,r\}$ the fill the appropriate symbol , \in or \notin in the

blanks.

3.....C



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46. IF $A=\{0,2,4,6\}$, $B=\{3,5,7\}$ and $C=\{p,q,r\}$ the fill the appropriate symbol , \in or \notin in the blanks.

4.....B



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47. IF $A=\{0,2,4,6\}$, $B=\{3,5,7\}$ and $C=\{p,q,r\}$ the fill the appropriate symbol , \in or \notin in the blanks.

8.....A



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48. IF $A=\{0,2,4,6\}$, $B=\{3,5,7\}$ and $C=\{p,q,r\}$ the fill the appropriate symbol , \in or \notin in the blanks.

p.....C





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49. IF $A=\{0,2,4,6\}$, $B=\{3,5,7\}$ and $C=\{p,q,r\}$ the fill the appropriate symbol , \in or \notin in the blanks.

7.....B



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50. Express the following statements using symbols.

The elements 'X' does not belong to 'A'.



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51. Express the following statements using symbols.

'd' is an element of the set 'B'



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52. Express the following statements using symbols.

'l' belongs to the set of Natural numbers N .





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53. Express the following statements using symbols.

'8' does not belong to the set of prime numbers P .



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54. State which of the following statements are true.

$$\{\} = \phi$$



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55. State whether the following statements are true or false. Justify your answer.

$S = \{5, 6, 7\}$ implies $8 \in S$.



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56. State whether the following statements are true or false. Justify your answer.

$-5 \notin W$ where 'W' is the set of whole numbers.



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57. State whether the following statements are true or false. Justify your answer.

$$\frac{8}{11} \in \mathbb{Z}$$



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58. Write the following sets in roster form.

$B = \{x : x \text{ is a natural number smaller than } 6\}$.



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59. Write the following sets in roster form.

$C = \{x : x \text{ is a two-digit natural number such that the sum of its digits is } 8\}$.



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60. Write the following sets in roster form:

$D = \{x : x \text{ is a prime number which is divisor of } 60\}$



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61. Write the following sets in roster form:

$E =$ The set of all letters in the word

TRIGONOMETRY



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62. Write the following sets in the set-builder form.

$\{3,6,9,12\}$



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63. Write the following sets in the set-builder form.

$\{2,4,8,16,32\}$



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64. Write the following sets in the set-builder form.

$\{5,25,125,625\}$



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65. Write the following sets in the set-builder form.

$\{1,4,9,16,25,\dots,100\}$



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66. Write the following sets in roster-form.

$A = \{x : x \text{ is a natural number greater than } 50 \text{ but smaller than } 100\}$



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67. Write the following sets in roster-form.

$$B = \{x : x \text{ is an integer, } x^2 = 4\}$$



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68. Write the following sets in roster-form.

$$D = \{x : x \text{ is a letter in the word "LOYAL"}\}$$



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69. $A=\{1,2,3,4\}$, $B=\{2,4\}$, $C=\{1,2,3,4,7\}$, $F=\{\}$.

Fill in the blanks with \subset or $\not\subset$

(i) $A \dots b$ (ii) $C \dots A$ (iii) $B \dots A$

(iv) $A \dots C$ (v) $B \dots C$ (vi) $\phi \dots B$



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70. $A=\{1,2,3,4\}$, $B=\{2,4\}$, $C=\{1,2,3,4,7\}$, $F=\{\}$.

Fill in the blanks with \subset or $\not\subset$

(i) $A \dots b$ (ii) $C \dots A$ (iii) $B \dots A$

(iv) $A \dots C$ (v) $B \dots C$ (vi) $\phi \dots B$





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71. $A=\{1,2,3,4\}$, $B=\{2,4\}$, $C=\{1,2,3,4,7\}$, $F=\{\}$.

Fill in the blanks with \subset or $\not\subset$

(i) $A \dots b$ (ii) $C \dots A$ (iii) $B \dots A$

(iv) $A \dots C$ (v) $B \dots C$ (vi) $\phi \dots B$



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72. $A=\{1,2,3,4\}$, $B=\{2,4\}$, $C=\{1,2,3,4,7\}$, $F=\{\}$.

Fill in the blanks with \subset or $\not\subset$

(i) $A \dots b$ (ii) $C \dots A$ (iii) $B \dots A$

(iv) $A \dots C$ (v) $B \dots C$ (vi) $\phi \dots B$



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73. $A = \{1, 2, 3, 4\}$, $B = \{2, 4\}$, $C = \{1, 2, 3, 4, 7\}$, $F = \{\}$.

Fill in the blanks with \subset or $\not\subset$

(i) $A \dots b$ (ii) $C \dots A$ (iii) $B \dots A$

(iv) $A \dots C$ (v) $B \dots C$ (vi) $\phi \dots B$



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74. $A = \{1,2,3,4\}$, $B = \{2,4\}$, $C = \{1,2,3,4,7\}$, $F = \{\}$

Fill in the blanks with \subset or $\not\subset$.

F.....B



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75. State which of the following statements are true.

$$\{\} = \phi$$



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76. Which of the following statements are true



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77. State which of the following statement are true.

(i) $\{\}$ = ϕ (ii) ϕ = 0 (iii) 0 = $\{0\}$



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78. Let $A = \{1, 3, 7, 8\}$ and $B = \{2, 4, 7, 9\}$ Find $A \cap B$.





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79. If $A=\{6,9,11\}$, $B=\{\}$. Find $A \cup \phi$.



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80. $A=\{1,2,3,4,5,6,7,8,9,10\}$, $B=\{2,3,5,7\}$. Find $A \cap B$

and show that $A \cap B=B$.



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81. If $A = \{4, 5, 6\}$, $B = \{7, 8\}$, then show that

$$A \cup B = B \cup A.$$



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82. IF $A=\{1,2,3,4,5\}$, $B=\{4,5,6,7\}$, then find $A-B$ and

$B-A$. Are they equal?



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83. IF $V=\{a,e,l,o,u\}$ and $B=\{a,o,k,u\}$, find $V-B$ and $B-V$.



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84. $A=\{\text{set of quadrilaterals}\}$, $B=\{\text{square, rectangle, trapezium, rhombus}\}$.

State whether $A \subset B$ or $B \subset A$. Justify your answer.



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85. If $A=\{a,b,c,d\}$. How many subsets does the set A have?

A. 5

B. 6

C. 16

D. 65

Answer:



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86. P is the set of factors of 5, Q is the set of factors of 25 and R is the set of factors of 125.

Which one of the following is false?

A. $P \subset Q$

B. $Q \subset R$

C. $R \subset P$

D. $P \subset R$

Answer:



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87. A is the set of prime numbers smaller than 10, B is the set of odd number < 10 and C is the set of even number < 10 . How many of the following statements are true?

(i) $A \subset B$ (ii) $B \subset A$ (iii) $A \subset C$ (iv) $C \subset A$ (v)
 $B \subset C$ (vi) $C \subset B$



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88. List out some sets A and B and choose their elements such that A and B are disjoint.





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89. IF $A=\{2,3,5\}$, find $A \cup \phi$ and $\phi \cup A$ and compare.



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90. IF $A=\{1,2,3,4\}$, $B=\{1,2,3,4,5,6,7,8\}$, then find $A \cup B$, $A \cap B$. What do you notice about the result?



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91. $A=\{1,2,3,4,5,6\}$, $B=\{2,4,6,8,10\}$. Find the intersection of A and B.



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92. Is empty set subset to every set?



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93. Is any set subset to itself?



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94. You are given two sets such that a set is not a subset of the other. If you have to prove this , how do you prove?



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95. The intersection of any two disjoint sets is a null set. Justify your answer.



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96. The sets $A-B$, $B-A$ and $A \cap B$ are mutually disjoint sets. Use examples to observe if this is true.



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97. Let $A=\{2,5,6,8\}$ and $B=\{5,7,9,1\}$. Find $A \cup B$



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98. Let $A=\{a,e,i,o,u\}$ and $B=\{a,i,u\}$. Show that $A \cup B = A$.



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99. If $A=\{1,2,3,4\}$ and $B=\{2,4,6,8\}$. Find $A \cup B$



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100. Find $A \cap B$ when $A = \{5, 6, 7, 8\}$ and $B = \{7, 8, 9, 10\}$.



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101. IF $A=\{1,2,3\}$ and $B=\{3,4,5\}$, then Illustrate $A \cap B$ in Venn-diagrams.



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102. Let $A=\{1,2,3,4,5\}$, $B=\{4,5,6,7\}$. Find $A-B$.



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103. If $A = \{1, 2, 3, 4\}$, $B = \{1, 2, 3, 5, 6\}$, then find

$A \cap B$ and $B \cap A$. Are they equal ?



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104. If $A = \{0, 2, 4\}$, find $A \cap \phi$ and $A \cap A$.

Comment.



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105. IF $A=\{2,4,6,8,10\}$ and $B=\{3,6,9,12,15\}$, find $A-B$ and $B-A$.



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106. IF A and B are two sets such that $A \subset B$ then, What is $A \cup B$?



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107. If $A = \{x : x \text{ is a natural number}\}$, $B = \{x : x \text{ is an even natural number}\}$

$C = \{x : x \text{ is an odd natural number}\}$ and $D = \{x : x \text{ is a prime number}\}$, find

$C \cap D$



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108. If $A = \{3, 6, 9, 12, 15, 18, 21\}$, $B = \{4, 8, 12, 16, 20\}$

$C = \{2, 4, 6, 8, 12, 14, 16\}$ and $D = \{5, 10, 15, 20\}$, find

(i) A-B (ii) A-C (iii) A-D (iv) B-A (v) C-A

(vi) D-A (vii) B-C (viii) B-D (ix) C-B (x) D-B



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109. If $A=\{3,6,9,12,15,18,21\}$, $B=\{4,8,12,16,20\}$

$C=\{2,4,6,8,12,14,16\}$ and $D=\{5,10,15,20\}$, find

(i) A-B (ii) A-C (iii) A-D (iv) B-A (v) C-A

(vi) D-A (vii) B-C (viii) B-D (ix) C-B (x) D-B



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110. If $A=\{3,6,9,12,15,18,21\}$, $B=\{4,8,12,16,20\}$

$C=\{2,4,6,8,12,14,16\}$ and $D=\{5,10,15,20\}$, find

(i) $A-B$ (ii) $A-C$ (iii) $A-D$ (iv) $B-A$ (v) $C-A$

(vi) $D-A$ (vii) $B-C$ (viii) $B-D$ (ix) $C-B$ (x) $D-B$



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111. If $A=\{3,6,9,12,15,18,21\}$, $B=\{4,8,12,16,20\}$

$C=\{2,4,6,8,12,14,16\}$ and $D=\{5,10,15,20\}$, find

(i) $A-B$ (ii) $A-C$ (iii) $A-D$ (iv) $B-A$ (v) $C-A$

(vi) $D-A$ (vii) $B-C$ (viii) $B-D$ (ix) $C-B$ (x) $D-B$





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112. If $A=\{3,6,9,12,15,18,21\}$, $B=\{4,8,12,16,20\}$

$C=\{2,4,6,8,12,14,16\}$ and $D=\{5,10,15,20\}$, find

(i) $A-B$ (ii) $A-C$ (iii) $A-D$ (iv) $B-A$ (v) $C-A$

(vi) $D-A$ (vii) $B-C$ (viii) $B-D$ (ix) $C-B$ (x) $D-B$



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113. If $A=\{3,6,9,12,15,18,21\}$, $B=\{4,8,12,16,20\}$

$C=\{2,4,6,8,12,14,16\}$ and $D=\{5,10,15,20\}$, find

(i) A-B (ii) A-C (iii) A-D (iv) B-A (v) C-A

(vi) D-A (vii) B-C (viii) B-D (ix) C-B (x) D-B



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114. If $A=\{3,6,9,12,15,18,21\}$, $B=\{4,8,12,16,20\}$

$C=\{2,4,6,8,12,14,16\}$ and $D=\{5,10,15,20\}$, find

(i) A-B (ii) A-C (iii) A-D (iv) B-A (v) C-A

(vi) D-A (vii) B-C (viii) B-D (ix) C-B (x) D-B



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115. If $A=\{3,6,9,12,15,18,21\}$, $B=\{4,8,12,16,20\}$

$C=\{2,4,6,8,12,14,16\}$ and $D=\{5,10,15,20\}$, find

(i) $A-B$ (ii) $A-C$ (iii) $A-D$ (iv) $B-A$ (v) $C-A$

(vi) $D-A$ (vii) $B-C$ (viii) $B-D$ (ix) $C-B$ (x) $D-B$



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116. If $A=\{3,6,9,12,15,18,21\}$, $B=\{4,8,12,16,20\}$

$C=\{2,4,6,8,12,14,16\}$ and $D=\{5,10,15,20\}$, find

(i) $A-B$ (ii) $A-C$ (iii) $A-D$ (iv) $B-A$ (v) $C-A$

(vi) $D-A$ (vii) $B-C$ (viii) $B-D$ (ix) $C-B$ (x) $D-B$





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117. If $A=\{3,6,9,12,15,18,21\}$, $B=\{4,8,12,16,20\}$

$C=\{2,4,6,8,12,14,16\}$ and $D=\{5,10,15,20\}$, find

(i) $A-B$ (ii) $A-C$ (iii) $A-D$ (iv) $B-A$ (v) $C-A$

(vi) $D-A$ (vii) $B-C$ (viii) $B-D$ (ix) $C-B$ (x) $D-B$



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118. State whether each of the following statement is true or false. Justify your answers.

$\{2,3,4,5\}$ and $\{3,6\}$ and disjoint sets.



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119. State whether each of the following statement is true or false. Justify your answers.

$\{a,e,l,o,u\}$ and $\{a,b,c,d\}$ are disjoint sets.



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120. State whether each of the following statement is true or false. Justify your answers.

$\{2,6,10,14\}$ and $\{3,7,11,15\}$ are disjoint sets.





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121. State whether each of the following statement is true or false. Justify your answers.

$\{2,6,10\}$ and $\{3,7,11\}$ are disjoint sets.



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122. IF $A=\{p,q,r\}$ and $B=\{q,p,r\}$, then check whether $A=B$ or not.



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123. IF $A=\{1,2,3,\dots\}$ and N is a set of natural numbers, then check whether A and N are equal?



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124. Consider the sets $A=\{p,q,r,s\}$ and $B=\{1,2,3,4\}$.
Are they equal?



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125. Let A be the set of prime numbers smaller than 6 and p the set of prime factors of 30. Check if A and P are equal.



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126. Show that the sets A and B are equal, where

$A = \{x : x \text{ is a letter in the word}\}$

$B = \{x : x \text{ is a letter in the word}\}$



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127. Consider the sets ϕ $A=\{1,3\}$, $B=\{1,5,9\}$, $C=\{1,3,5,7,9\}$. Insert the symbol \subset or $\not\subset$ between each of the following pair of sets.

ϕ B



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128. Consider the sets ϕ $A=\{1,3\}$, $B=\{1,5,9\}$, $C=\{1,3,5,7,9\}$. Insert the symbol \subset or $\not\subset$ between each of the following pair of sets.

A.....B



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129. Consider the sets ϕ $A=\{1,3\}$, $B=\{1,5,9\}$, $C=\{1,3,5,7,9\}$. Insert the symbol \subset or $\not\subset$ between each of the following pair of sets.

A.....C



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130. Consider the sets ϕ $A=\{1,3\}$, $B=\{1,5,9\}$, $C=\{1,3,5,7,9\}$. Insert the symbol \subset or $\not\subset$

between each of the following pair of sets.

B.....C



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131. Which of the following sets are equal?

$A = \{x : x \text{ is a letter in the word FOLLOW}\}$, $B = \{x : x \text{ is a letter in the word FLOW}\}$ and $C = \{x : x \text{ is a letter in the word WOLF}\}$



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132. Which of the following sets are equal?

$A = \{x : x \text{ is a letter in the word FOLLOW}\}$, $B = \{x : x \text{ is a letter in the word FLOW}\}$ and $C = \{x : x \text{ is a letter in the word WOLF}\}$



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133. Which of the following sets are equal?

$A = \{x : x \text{ is a letter in the word FOLLOW}\}$, $B = \{x : x \text{ is a letter in the word FLOW}\}$ and $C = \{x : x \text{ is a letter in the word WOLF}\}$



134. Consider the following sets and fill up the blanks in the statement given below with = or \neq so as to make the statement true.

$$A = \{1, 2, 3\}$$

$$B = \{\text{the first three natural numbers}\},$$

$$C = \{a, b, c, d\}$$

$$D = \{d, c, a, b\},$$

$$E = \{a, e, l, o, u\},$$

$$F = \{\text{Set of words in English Alphabet}\}$$

$$A \dots B$$



135. Consider the following sets and fill up the blanks in the statement given below with = or \neq so as to make the statement true.

$$A = \{1, 2, 3\}$$

$$B = \{\text{the first three natural numbers}\},$$

$$C = \{a, b, c, d\}$$

$$D = \{d, c, a, b\},$$

$$E = \{a, e, i, o, u\},$$

$$F = \{\text{Set of words in English Alphabet}\}$$

A....E



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136. Consider the following sets and fill up the blanks in the statement given below with = or \neq so as to make the statement true.

$$A = \{1, 2, 3\}$$

$$B = \{\text{the first three natural numbers}\},$$

$$C = \{a, b, c, d\}$$

$$D = \{d, c, a, b\},$$

$$E = \{a, e, l, o, u\},$$

$$F = \{\text{Set of words in English Alphabet}\}$$

$$C \dots D$$



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137. Consider the following sets and fill up the blanks in the statement given below with = or \neq so as to make the statement true.

$$A = \{1, 2, 3\}$$

$B = \{\text{the first three natural numbers}\},$

$$C = \{a, b, c, d\}$$

$$D = \{d, c, a, b\},$$

$$E = \{a, e, l, o, u\},$$

$F = \{\text{Set of words in English Alphabet}\}$

D.....F



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138. Consider the following sets and fill up the blanks in the statement given below with = or \neq so as to make the statement true.

$$A = \{1, 2, 3\}$$

$B = \{\text{the first three natural numbers}\},$

$$C = \{a, b, c, d\}$$

$$D = \{d, c, a, b\},$$

$$E = \{a, e, l, o, u\},$$

$F = \{\text{Set of words in English Alphabet}\}$

F.....A



Watch Video Solution

139. Consider the following sets and fill up the blanks in the statement given below with = or \neq so as to make the statement true.

$$A = \{1, 2, 3\}$$

$$B = \{\text{the first three natural numbers}\},$$

$$C = \{a, b, c, d\}$$

$$D = \{d, c, a, b\},$$

$$E = \{a, e, l, o, u\},$$

$$F = \{\text{Set of words in English Alphabet}\}$$

$$D \dots \dots \dots E$$



Watch Video Solution

140. Consider the following sets and fill up the blanks in the statement given below with = or \neq so as to make the statement true.

$$A = \{1, 2, 3\}$$

$B = \{\text{the first three natural numbers}\},$

$$C = \{a, b, c, d\}$$

$$D = \{d, c, a, b\},$$

$$E = \{a, e, l, o, u\},$$

$F = \{\text{Set of words in English Alphabet}\}$

F.....B



Watch Video Solution

141. In each of the following .state whether $A=B$ or not.

$$A=\{a,b,c,d\}, B=\{d,c,a,b\}$$



Watch Video Solution

142. In each of the following .state whether $A=B$ or not.

$$A=\{4,8,12,16\}, B=\{8,4,16,18\}$$



Watch Video Solution

143. In the following, state whether $A = B$ or not:

$A = \{2, 4, 6, 8, 10\}$ $B = \{x : x \text{ is positive even integer and } x \leq 10\}$



Watch Video Solution

144. In each of the following .state whether $A=B$ or not.

$A = \{x : x \text{ is a multiple of } 10\}$

$B = \{10, 15, 20, 25, 30, \dots\}$



[Watch Video Solution](#)

145. State the reasons for the following:

$\{1, 2, 3, \dots, 10\} \neq \{x : x \in \mathbb{N} \text{ and } 1 < x < 10\}$



[Watch Video Solution](#)

146. State the reasons for the following:

$\{2, 4, 6, 8, 10\} \neq \{x : x = 2n + 1 \text{ and } x \in \mathbb{N}\}$



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147. State the reasons for the following:

$$\{5,15,30,45\} \neq \{x:x \text{ is a multiple of } 15\}$$



Watch Video Solution

148. State the reasons for the following:

$$\{2,3,5,7,9\} \neq \{x:x \text{ is a prime number}\}$$



Watch Video Solution

149. List all the subsets of the following sets.

$$B = \{p, q\}$$



Watch Video Solution

150. List all the subsets of the following sets.

$$C = \{x, y, z\}$$



Watch Video Solution

151. List all the subsets of the following sets.

$$D=\{a,b,c,d\}$$



Watch Video Solution

152. List all the subsets of the following sets.

$$E=\{1,4,9,16\}$$



Watch Video Solution

153. List all the subsets of the following sets.

$$F = \{10, 100, 1000\}$$



Watch Video Solution

154. State which of the following sets are finite and infinite.

$$\{x : x \in N \text{ and } (x - 1)(x - 2) = 0\}$$



Watch Video Solution

155. State which of the following sets are finite and infinite.

$$\{x : x \in N \text{ and } x^2 = 4\}$$



Watch Video Solution

156. State which of the following sets are finite and infinite.

$$\{x : x \in N \text{ and } 2x - 2 = 0\}$$



Watch Video Solution

157. State which of the following sets are finite and infinite.

$$\{x : x \in \mathbb{N} \text{ and } x \text{ is prime}\}$$



Watch Video Solution

158. State which of the following sets are finite and infinite.

$$\{x : x \in \mathbb{N} \text{ and } x \text{ is odd}\}$$



Watch Video Solution

159. IF $A=\{1,2,3,4,5\}, B=\{2,4,6,8\}$ then find $n (A \cup B)$.



Watch Video Solution

160. Which of the following are empty sets?

Justify your answer.

Set of integers which lie between 2 and 3.



Watch Video Solution

161. Which of the following are empty sets?

Justify your answer.

Set of natural numbers that are smaller than 1.



Watch Video Solution

162. Which of the following are empty sets?

Justify your answer.

Set of odd numbers that leave remainder zero, when divided by 2.



Watch Video Solution

163. State which of the following sets are finite and which are infinite. Give reasons for your answer.

$$A = \{x : x \in N \text{ and } x < 100\}$$



Watch Video Solution

164. State which of the following sets are finite and which are infinite. Give reasons for your answer.

$$B = \{x : x \in N \text{ and } x \leq 5\}$$



[Watch Video Solution](#)

165. State which of the following sets are finite and which are infinite. Give reasons for your answer.

$$C = \{1^2, 2^2, 3^2, \dots\}$$



[Watch Video Solution](#)

166. State which of the following sets are finite and which are infinite. Give reasons for your

answer.

$$D = \{1, 2, 3, 4\}$$



[Watch Video Solution](#)

167. State which of the following sets are finite and which are infinite. Give reasons for your answer.

$\{x: x \text{ is a day of the week}\}$



[Watch Video Solution](#)

168. Tick the set which is finite

A. The set of whole numbers It 10

B. The set of prime numbers It 10

C. The set of integers It 10

D. The set of factors of 10

Answer:



Watch Video Solution

169. Which of the following sets are empty sets? Justify your answer

$$A = \{x : x^2 = 4 \text{ and } 3x = 9\}$$



[Watch Video Solution](#)

170. Which of the following sets are empty sets? Justify your answer

The sets of all triangles in a plane having the sum of their three angles less than 180.



[Watch Video Solution](#)

171. $B = \{x : x + 5 = 5\}$ is not an empty set. Why?



Watch Video Solution

172. An empty set is a finite set, Is this statement true or false? Why?



Watch Video Solution

173. What is the relation between $n(A)$, $n(B)$, $n(A \cap B)$ and $n(A \cup B)$?



Watch Video Solution

174. IF A and B are disjoint sets then how can you find $n(A \cup B)$?



Watch Video Solution

175. State which of the following sets are empty and which are not?

The set of lines passing through a given point.



Watch Video Solution

176. State which of the following sets are empty and which are not?

Set of odd natural numbers divisible by 2.



Watch Video Solution

177. State which of the following sets are empty and which are not?

$\{x: x \text{ is a natural number, } x < 5 \text{ and } x > 7\}$



Watch Video Solution

178. State which of the following sets are empty and which are not?

$\{x: x \text{ is a common point to any two parallel lines}\}$



Watch Video Solution

179. State which of the following sets are empty and which are not?

Set of even prime numbers.



Watch Video Solution

180. Which of the following sets are finite or infinite?

The set of month in a year.



Watch Video Solution

181. Which of the following sets are finite or infinite?

$\{1,2,3,\dots,99,100\}$



Watch Video Solution

182. Which of the following sets are finite or infinite?

The set of prime numbers smaller than 99.



Watch Video Solution

183. State whether each of the following sets is finite or infinite.

The set of letters in the English alphabet.



Watch Video Solution

184. State whether each of the following sets is finite or infinite.

The set of lines which are parallel to the X-axis.



Watch Video Solution

185. State whether each of the following sets is finite or infinite.

The set of numbers which are multiple of 5.



[Watch Video Solution](#)

186. State whether each of the following sets is finite or infinite.

The set of circles passing through the origin $(0,0)$.



[Watch Video Solution](#)

187. Which of the following are sets? Justify your answer.

the collection of all months of a year beginning with letter 'M'



Watch Video Solution

188. Which of the following are sets? Justify your answer.

A team of eleven best cricket batsmen of the world.



[Watch Video Solution](#)

189. Which of the following are sets? Justify your answer.

The collection of all boys in your class.



[Watch Video Solution](#)

190. Which of the following are sets? Justify your answer.

The collection of all odd integers.





Watch Video Solution

191. If $A = \{ 1,2,3,4\}$ $B = \{5,6,7\}$ and $C = \{p,q,r,s\}$, then fill the appropriate symbol, \in or \notin in the blanks.

2.....A



Watch Video Solution

192. If $A = \{ 1,2,3,4\}$ $B = \{5,6,7\}$ and $C = \{p,q,r,s\}$, then fill the appropriate symbol, \in or \notin in

the blanks.

6....C



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193. If $A = \{ 1,2,3,4\}$ $B = \{5,6,7\}$ and $C = \{p,q,r,s\}$,

then fill the appropriate symbol, \in or \notin in

the blanks.

4....B



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194. If $A = \{ 1,2,3,4\}$ $B = \{5,6,7\}$ and $C = \{p,q,r,s\}$, then fill the appropriate symbol, \in or \notin in the blanks.

q...C



Watch Video Solution

195. If $A = \{ 1,2,3,4\}$ $B = \{5,6,7\}$ and $C = \{p,q,r,s\}$, then fill the appropriate symbol, \in or \notin in the blanks.

5.....B





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196. If $A = \{ 1,2,3,4\}$ $B = \{5,6,7\}$ and $C = \{p,q,r,s\}$, then fill the appropriate symbol, \in or \notin in the blanks.

8.....A



Watch Video Solution

197. Express the following statements using symbols.

The element p does not belong to 'A'



Watch Video Solution

198. Express the following statements using symbols.

'q' is an element of the set 'B'



Watch Video Solution

199. Express the following statements using symbols.

4 belongs to the set of Natural numbers N





[Watch Video Solution](#)

200. Express the following statements using symbols.

5 belongs to the set prime numbers P



[Watch Video Solution](#)

201. Write the following sets in roaster form

$A = \{x: x \text{ is a natural number less than } 8\}$



[Watch Video Solution](#)

202. Write the following sets in roaster form

$B = \{ x: x \text{ is a two digital natural number such that the sum of its digits is } 5 \}$



[Watch Video Solution](#)

203. Write the following sets in roaster form

$C = \{ x: x \text{ is a prime number which is a divisor of } 30 \}$



[Watch Video Solution](#)

204. Write the following sets in roaster form

$D = \{ \text{the set of all letters in the word CRICKET} \}$



Watch Video Solution

205. Write the following sets in the set-builder form

$A = \{5, 10, 15, 20\}$



Watch Video Solution

206. Write the following sets in the set-builder form

$$B = \{3,9,27,81\}$$



Watch Video Solution

207. Write the following sets in the set-builder form

$$C = \{4,16,64,256\}$$



Watch Video Solution

208. Write the following sets in the set-builder form

$$D = \{1, 8, 27, 64, 125, \dots, 1000\}$$



Watch Video Solution

209. If $A = \{1, 2, 3, 4, 5\}$, $B = \{3, 4, 5, 6\}$, then find $A \cup B$ and $A \cap B$.



Watch Video Solution

210. If $A = \{4,5,6,7,8\}$, $B = \{7,8,9,10,11\}$ then find $A-B$ and $B-A$.



Watch Video Solution

211. Which of the following pairs of sets are disjoint?

$A = \{3,4,5,6\}$, $B = \{4,6\}$



Watch Video Solution

212. Which of the following pairs of sets are disjoint?

$$A = \{a, e, i, o, u\}, B = \{l, j, k\}$$



[Watch Video Solution](#)

213. Which of the following pairs of sets are disjoint?

$$A = \{5, 10, 15, 20\}, B = \{8, 16, 24\}$$



[Watch Video Solution](#)

214. Which of the following pairs of sets are disjoint?

$$A = \{1,3,5,7\}, B = \{2,4,6,8\}$$



Watch Video Solution

215. If $A = \{3,4,5,6,7\}$, $B = \{2,4,5,8\}$ then find $n(A \cup B)$.



Watch Video Solution

216. If A and B are two sets and $n(A) = 15$, $n(B) = 25$ and $n(A \cap B) = 10$ find $n(A \cup B)$



Watch Video Solution

217. following set is equal or not?

$A = \{3,4,5,6\}$, $B = \{7,8,9,10\}$



Watch Video Solution

218. In each of the following .state whether $A=B$ or not.

$$A=\{a,b,c,d\}, B=\{d,c,a,b\}$$



[Watch Video Solution](#)

219. following set is equal or not?

$$E = \{2,4,6,8\}, F = \{x: x \text{ is a positive even number} \\ < 10\}$$



[Watch Video Solution](#)

220. following set is equal or not?

$G = \{5,10,15,20,\dots\}, H = \{x: x \text{ is a multiple of } 5\}$



Watch Video Solution

221. State the reasons for the following.

$\{4,5,6,\dots,12\} \neq \{x : x \in \mathbb{N} \text{ and } 4 < x < 12\}$



Watch Video Solution

222. State the reasons for the following:

$$\{2,4,6,8,10\} \neq \{x:x = 2n+1 \text{ and } x \in \mathbb{N}\}$$



Watch Video Solution

223. State the reasons for the following.

$$\{3,6,9,12\} \neq \{x: x \text{ is a multiple of } 3\}$$



Watch Video Solution

224. State the reasons for the following.

$$\{1,3,5,7,9\} \neq \{x: x \text{ is an even number}\}$$



Watch Video Solution

225. Write down all the subsets of the following sets

$$\{a, b\}$$



Watch Video Solution

226. List all the subsets of the following

$$B = \{p, q, r\}$$



Watch Video Solution

227. Write down all the subsets of the following sets

$$\{1, 2, 3\}$$



Watch Video Solution

228. State which of the following sets are empty

Set of integers which lie between 5 and 6.



Watch Video Solution

229. State which of the following sets are empty and which are not?

Set of odd natural numbers divisible by 2.



Watch Video Solution

230. State which of the following sets are empty

The set of lines which are parallel to the Y-axis.



Watch Video Solution

231. State which of the following sets are empty

$\{x: x \text{ is a natural number, } x < 6 \text{ and } x > 8\}$



Watch Video Solution

232. Which of the following set is finite or infinite?

$$A = \{x : x \in \mathbb{N} \text{ and } x \leq 50\}$$



Watch Video Solution

233. Which of the following set is finite or infinite?

$$B = \{x : x \in \mathbb{N} \text{ and } x \leq 10\}$$



Watch Video Solution

234. Which of the following set is finite or infinite?

$$C = \{1^3, 2^2, 3^3, \dots\}$$



Watch Video Solution

235. Which of the following set is finite or infinite?

$$D = \{x : x \in \mathbb{N} \text{ and } x \text{ is even}\}$$



Watch Video Solution

236. If $A = \{1,2,3,4,5\}$, $B = \{4,5,6,7\}$ then find $B-A$.



Watch Video Solution

237. If $A = \{0,1,2\}$ and $B = \{2,4\}$ then find $n(A \cup B)$



Watch Video Solution

238. If 'A' is the set of all primes below '5' and 'B' is the set of all prime factors of '30', then is

$$A-B = B-A?$$



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239. Represent the following through Venn-diagram.

$$A-B$$



Watch Video Solution

240. Represent the following through Venn-diagram.

B-A



Watch Video Solution

241. Represent the following through Venn-diagram.

$$A \cup B$$



Watch Video Solution

242. Represent the following through Venn-diagram.

$$A \cap B$$



Watch Video Solution

243. If $A = \{x: 'x' \text{ is a Natural number below } 10\}$

$B = \{x: 'x' \text{ is an even number below } 10\}$

$C = \{x: 'x' \text{ is an odd number below } 10\}$ then

find $A-B$



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244. If $A = \{x: 'x' \text{ is a Natural number below } 10\}$

$B = \{x: 'x' \text{ is an even number below } 10\}$

$C = \{x: 'x' \text{ is an odd number below } 10\}$ then

find $A - C$



Watch Video Solution

245. If $A = \{x: 'x' \text{ is a Natural number below } 10\}$

$B = \{x: 'x' \text{ is an even number below } 10\}$

$C = \{x: 'x' \text{ is an odd number below } 10\}$ then

find $B \cup C$





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246. Write the set $A = \{1, 4, 9, 16, 25, \dots\}$ in set-builder form.



Watch Video Solution

247. If $A = \{x / x \text{ is a prime number and } x < 20\}$ then

$B = \{x / 2x + 1, x \in w \text{ and } x < 9\}$ then Find

$A \cap B$



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248. If $A = \{x / x \text{ is a prime number and } x < 20 \}$

then

$B = \{x / 2x + 1, x \in w \text{ and } x < 9\}$ then Find

$B \cap A$



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249. If $A = \{x / x \text{ is a prime number and } x < 20 \}$

then

$B = \{x / 2x + 1, x \in w \text{ and } x < 9\}$ then Find

$\setminus A - B$



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250. If $A = \{x / x \text{ is a prime number and } x < 20 \}$

then

$B = \{x / 2x + 1, x \in w \text{ and } x < 9\}$ then Find

$B - A$. What do you observe?



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251. Write roster and builder form of The set of all natural numbers which divide 42° .



Watch Video Solution

252. Write $A\{1,2,3,4\}$ in set builder form.



Watch Video Solution

253. Let $A=\{x / x \text{ is an even number}\}$

$B=\{x / x \text{ is an odd number}\}$

$C = \{x / x \text{ is a prime number} \}$

$D = \{x / x \text{ is a multiple of } 5\}$

Find

$A \cup B$



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254. Let $A = \{x / x \text{ is an even number}\}$

$B = \{x / x \text{ is an odd number}\}$

$C = \{x / x \text{ is a prime number} \}$

$D = \{x / x \text{ is a multiple of } 5\}$

Find

$$A \cap B$$



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255. Let $A = \{x / x \text{ is an even number}\}$

$B = \{x / x \text{ is an odd number}\}$

$C = \{x / x \text{ is a prime number}\}$

$D = \{x / x \text{ is a multiple of 5}\}$

Find

C-D



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256. Let $A = \{x / x \text{ is an even number}\}$

$B = \{x / x \text{ is an odd number}\}$

$C = \{x / x \text{ is a prime number}\}$

$D = \{x / x \text{ is a multiple of 5}\}$

Find

$A \cap C$.



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257. Write all the subsets of $B = \{p, q\}$



Watch Video Solution

258. Write the roster form of the set A.

$$A = \{x : x = 2n + 1 \forall n \in \mathbb{N}\}$$



Watch Video Solution

259. IF $A = \{1, 2, 3, 4\}$ and $B = \{1, 2, 3, 5, 6\}$ then find

$$A \cap B$$



Watch Video Solution

260. IF $A=\{1,2,3,4\}$ and $B=\{1,2,3,5,6\}$ then find

$B \cap A$



Watch Video Solution

261. IF $A=\{1,2,3,4\}$ and $B=\{1,2,3,5,6\}$ then find

$A-B$



Watch Video Solution

262. If $A = \{1,2,3,4\}$ and $B = \{1,2,3,5,6\}$ then find

$B-A$



Watch Video Solution

263. Write the Set builder form of $A-B$ where

$A = \{x : x \in N \text{ and } x < 20\}$ and $B = \{x : x \in N$

and $x \leq 5\}$



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264. IF $A = \{x / x \in N, x < 6\}$ and

$B = \{x : x \in N, 3 < x < 8\}$ then show that

$A-B \neq B-A$ with the help of Venn diagram.



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265. Write the set builder form of

$$A = \left\{ 1, \frac{1}{4}, \frac{1}{9}, \frac{1}{16}, \frac{1}{25} \right\}$$



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266. IF x is set of all factors of 24 and y is set all factors of 36 then find $X \cup Y$ and $X \cap Y$ using Venn diagrams. Comment.



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267. If $A = \{2,3,4,5\}$, $B = \{1,5,6\}$ $C = \{6,7,8,9,10\}$ $D = \{0,2,5,7\}$

Find

$A \cup B, B \cup C, C \cup D, A \cap B, B \cap C, C \cap D$

.





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268. If $A = \{1,2,3,4\}$, $B = \{5,6\}$ $C = \{3,4,5,6\}$ $D = \{4,6,7,8\}$

Find $A \cup B \cup C$, $B \cup C$, $C \cup D$, $C \cap D$,



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269. If $A = \{5,6,7,8,9,10\}$

$B = \{4,8,12,16,20\}$

$C = \{5,10,15,20\}$ $D = \{3,6,9,12,15\}$ Find $A-B$, $C-D$, $B-C$,

$A-D$.



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270. If $A = \{1,2,3,4,5\}$, $B = \{2,4,6,8\}$ $C = \{3,6,9,12\}$, $D = \{6,12,18,24\}$ Find $A-B$, $C-B$, $A-D$, $B-C$.



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271. Let $A = \{1,2,3,4,5\}$ $B = \{4,5,6,7\}$

Find $A-B$ and draw Venn-diagram of $A-B$



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272. Let $A = \{3,6,9,12\}$, $B = \{2,4,6,8\}$. Find $A-B, B-A$ and Venn-diagram of $A-B, B-A$.



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273. If $A = \{1,2,3,4\}$ and $B = \{2,4,6,8\}$ Find $A \cup B$ with Venn-diagram.



Watch Video Solution

274. If $A = \{2,4,6,8\}$ $B = \{1,5,10, 15\}$ Find $A \cup B$

with Venn-diagram.



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Exercise

1. Which of the following are sets? Justify your answer.

The collection of all even integers.

A. The collection of natural numbers which divides 75.

B. A collection of most dangerous animals in the world.

C. The collection of teachers in your school.

D. The collection of different problems in this chapter.

Answer:



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2. If $A = \{1,4,5,6,8\}$ and $B=\{3,7,10\}$, insert the appropriate symbol \in or \notin in the blank spaces.

3...A



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3. IF $A=\{0,2,4,6\}$, $B=\{3,5,7\}$ and $C=\{p,q,r\}$ the fill the appropriate symbol , \in or \notin in the blanks.

4.....B



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4. If $A = \{1,4,5,6,8\}$ and $B=\{3,7,10\}$, insert the appropriate symbol \in or \notin in the blank spaces.

2....B



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5. IF $A=\{0,2,4,6\}$, $B=\{3,5,7\}$ and $C=\{p,q,r\}$ the fill the appropriate symbol , \in or \notin in the

blanks.

7.....B



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6. If $A = \{1,4,5,6,8\}$ and $B = \{3,7,10\}$, insert the appropriate symbol \in or \notin in the blank spaces.

10...B



Watch Video Solution

7. If $A = \{1,4,5,6,8\}$ and $B=\{3,7,10\}$, insert the appropriate symbol \in or \notin in the blank spaces.

1....A



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8. Express the following statements using symbols.

The elements 'X' does not belong to 'A'.



[Watch Video Solution](#)

9. Express the following statements using symbols.

'd' is an element of the set 'B'



Watch Video Solution

10. 2 is.....of set of natural numbers.



Watch Video Solution

11. Express the following statements using symbols.

9 does not belong to the set of prime numbers P.



Watch Video Solution

12. Write the following set in roster form

$$A = \{x / x^2 = 16\}$$



Watch Video Solution

13. Write the following set in roster form

$$B = \{x / x \text{ is positive , } x \text{ is negative}\}$$



Watch Video Solution

14. Write the following set in roster form

$$C = \{x / x \text{ is a letter in word CALCULUS}\}$$



Watch Video Solution

15. Write the following set in roster form

$$D = \{x \mid x \text{ is an integer and } -2 \leq x < 6\}$$



Watch Video Solution

16. Write the following sets in the set-builder form.

$$A = \{3, 6, 9, 12, 15, \dots\}$$



Watch Video Solution

17. Write the following sets in the set-builder form.

$$B = \{-1, 1\}$$



Watch Video Solution

18. Write the following sets in the set-builder form :

$$\{2, 4, 6, \dots\}$$



Watch Video Solution

19. Write the following sets in the set-builder form

$$D = \{1, 8, 27, 64, 125, \dots, 1000\}$$



Watch Video Solution

20. If $A = \{1, 2, 3, 4\}$ and $B = \{3, 4, 5, 6\}$, then find $A \cap B$.



Watch Video Solution

21. If $A = \{a,b,c,d\}$, $B = \{c,d,e,f\}$ and $C = \{d,e,f,g\}$ then find $A \cap B$, $B \cap C$ and $A \cap C$,



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22. If $A = \{a,b\}$ and $B = \{a,b,c\}$, then find $A \cup B$.



[Watch Video Solution](#)

23. If $A = \{1,3,5\}$ and $B = \{1,2,3\}$, then find $A \cup B$ and $A \cap B$.



Watch Video Solution

24. If $A = \{3,5,7,9,11\}$, $B = \{7,9,11,13\}$, then find $A-B$ and $B-A$.



Watch Video Solution

25. Which of the following pairs of sets are disjoint?

A. $\{1,2,3,4\}$ and $\{x:x \text{ is a natural number and}$

$$4 \leq x \leq 6\}$$

B. $\{a,e,i,o,u\}$ and $\{c,d,e,f\}$

C. $\{x: x \text{ is an even integer}\}$ and $\{x: x \text{ is an odd integer}\}$

D.

Answer:



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26. A and B are two sets. If $n(A) = 17$, $n(B) = 23$, and $n(A \cup B) = 38$ find $n(A \cap B)$.



 [Watch Video Solution](#)

27. If $n(A) = 10$, $n(B) = 11$ and $n(A \cap B) = 6$,
 $n(A \cup B)$.



[Watch Video Solution](#)

28. Which of the following sets are equal?

$A = \{1,3,5,7\}$, $B = \{1,2,3,4\}$



[Watch Video Solution](#)

29. Which of the following sets are equal?

$$C = \{p, q, r\}, D = \{r, p, q\}$$



Watch Video Solution

30. Which of the following sets are equal?

$$E = \{1, 3, 5, 7, 9\}, F = \{x: x \text{ is a positive odd number} < +9\}$$



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31. Which of the following sets are equal?

$G = \{x : x \text{ is a multiple of } 6\}$, $H = \{6, 12, 18, 24, 30, \dots\}$



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32. Let $A = \{1, 2, 3, 4, 5\}$ Which of the following statements are true?

$\{3, 4\} \subset A$



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33. Let $A = \{1, 2, \{3, 4\}, 5\}$ Which of the following statements are true?

$$\{3, 4\} \in A$$



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34. Let $A = \{1, 2, 3, 4, 5\}$ Which of the following statements are true?

$$1 \in A$$



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35. Let $A = \{1,2,3,4,5\}$ Which of the following statements are true?

$$1 \subset A$$



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36. Let $A = \{1,2,3,4,5\}$ Which of the following statements are true?

$$\{1, 2, 5\} \subset A$$



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37. Let $A = \{1, 2, \{3, 4\}, 5\}$ Which of the following statements are true?

$$\phi \in A$$



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38. Let $A = \{1, 2, \{3, 4\}, 5\}$ Which of the following statements are true?

$$\{\phi\} \subset A$$



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39. Let $A = \{1, 2, \{3, 4\}, 5\}$ Which of the following statements are true?

$$\{\{3, 4\}\} \subset A$$



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40. let $A = \{\phi, \{\phi\}, 1, \{1, \phi\}, 7\}$. Which of the following are true?

$$\phi \in A$$



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41. let $A = \{\phi, \{\phi\}, 1, \{1, \phi\}, 7\}$. Which of the following are true?

$$\{\phi\} \in A$$



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42. let $A = \{\phi, \{\phi\}, 1, \{1, \phi\}, 7\}$. Which of the following are true?

$$\{1\} \in A$$



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43. let $A = \{\phi, \{\phi\}, 1, \{1, \phi\}, 7\}$. Which of the following are true?

$$\{7, \phi\} \subset A$$



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44. let $A = \{\phi, \{\phi\}, 1, \{1, \phi\}, 7\}$. Which of the following are true?

$$7 \subset A$$



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45. let $A = \{\phi, \{\phi\}, 1, \{1, \phi\}, 7\}$. Which of the following are true?

$$\{7, \{1\}\} \not\subset A$$



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46. let $A = \{\phi, \{\phi\}, 1, \{1, \phi\}, 7\}$. Which of the following are true?

$$\{\phi, \{\phi\}, \{1, \phi\}\} \subset A$$



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47. let $A = \{\phi, \{\phi\}, 1, \{1, \phi\}, 7\}$. Which of the following are true?

$$\{\{\phi\}\} \subset A$$



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48. Let $E = \{a,b\}$, which one of the following statements are correct or incorrect?

$$\{a\} \in E$$



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49. Let $E = \{a,b\}$, which one of the following statements are correct or incorrect?

$$\{b\} \subset E$$



Watch Video Solution

50. Let $E = \{a,b\}$, which one of the following statements are correct or incorrect?

$$\phi \in E$$



Watch Video Solution

51. Let $E = \{a,b\}$, which one of the following statements are correct or incorrect?

$$\phi \subset E$$



[Watch Video Solution](#)

52. Let $E = \{a,b\}$, which one of the following statements are correct or incorrect?

$$\{a, b\} \subset E$$



[Watch Video Solution](#)

53. Let $E = \{a,b\}$, which one of the following statements are correct or incorrect?

$$E \subset \{a, b, c\}$$



[Watch Video Solution](#)

54. Write down all the subsets of the following sets

$$\{1, 2, 3\}$$



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55. List the subsets of the following sets:

$$B = \{c,d\}$$



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56. State the following set is empty or not.

Set of people on the earth who are older than 500.



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57. State the following set is empty or not.

$\{x: x \text{ is a natural number, } x < 3 \text{ and } x > 5\}$



Watch Video Solution

58. State the following set is empty or not.

Set of all car which can run at a speed as fast as that of light.



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59. State whether each of the following set is finite or infinite:

The set of animals living on the earth



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60. State which of the following sets are finite and infinite.

$$\{x : x \in N \text{ and } (x - 1)(x - 2) = 0\}$$



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61. Which of the following set is finite or infinite?

$$\{x : x \in \mathbb{N} \text{ and } x^2 = 25\}$$



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62. State which of the following sets are finite and infinite.

$$\{x : x \in \mathbb{N} \text{ and } x \text{ is prime}\}$$



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63. State which of the following sets are finite and infinite.

$$\{x : x \in \mathbb{N} \text{ and } x \text{ is odd}\}$$



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64. If $A = \{2,3,4,5\}$ $B = \{2,4,6,8\}$ then find the value of $A-B$.



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65. If $n(A \cup B) = 8$, $n(A) = 6$, $n(B) = 4$ then $n(A \cap B) = \dots\dots\dots$



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66. Write the set builder form of $N = \{1, 2, 3, 4, \dots\}$



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67. IF A, B are disjoint sets such that $n(A) = 4$ and $n(A \cup B) = 7$, then $n(B) = \dots\dots\dots$



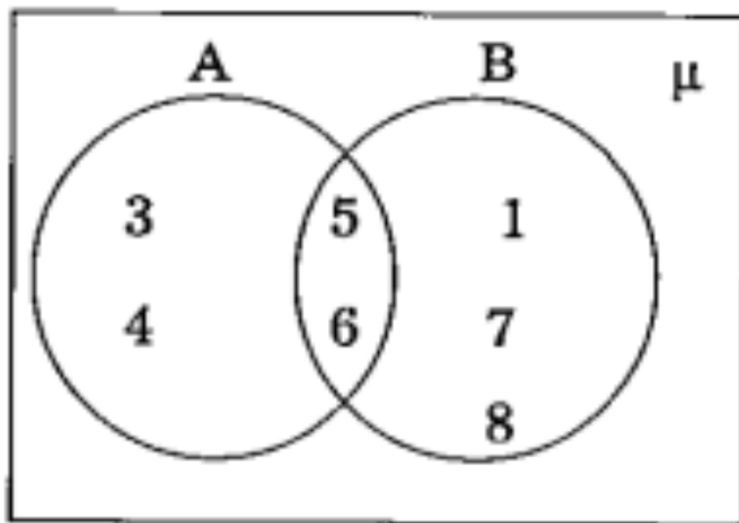
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68. $\{2,6,10\} \cap \{8,9,11,12,13\} = \dots\dots\dots$



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69. from the Venn diagram find $A \cap B$, $A \cup B$.





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70. If $n(A) = 4$ then find the value of $n(P(A))$.



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71. If $A = \{1,2,3,4\}$ $B = \{4,5,6,7\}$ Then

$$A \cap B$$



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72. If $A = \{1,2,3,4\}$ $B = \{4,5,6,7\}$ Then

$A \cup B$



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73. If $A = \{1,2,3,4\}$ $B = \{4,5,6,7\}$ Then

$A-B$



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74. If $A = \{1,2,3,4\}$ $B = \{4,5,6,7\}$ Then

$B-A$



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75. $A = \{2,4,6,8,10\}$ then its rule form is.....



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76. If $A = \{1, 2, 3, 4\}$, $B = \{2, 4, 6, 8\}$ then

$A \Delta B =$



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77. IF the number of proper subsets of a given set is 31 then the set contains elements.



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78. Write Roaster form of the set of Natural numbers less than 100.



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79. The symbol for a null set is

A. \in

B. \cup

C. ϕ

D. ~~\in~~

Answer:



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80. $C = \{x: x \text{ is a circle in a given plane} \}$ is

A. finite set

B. infinite set

C. universal set

D. void set

Answer:



Watch Video Solution

81. which of the following set is infinite?

A. The set of natural numbers ≤ 100

B. The set of even natural numbers
between 50 and 100.

C. The set of points on a circle.

D. The set of prime numbers between 10
and 50.

Answer:



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82. The number of elements in the set $D = \{x: x$
is a day of the week } is

A. 6

B. 4

C. 5

D. 7

Answer:



Watch Video Solution

83. The symbol of "implies" is.....

A. \Rightarrow

B. \Leftrightarrow

C. \subset

D. \supset

Answer:



Watch Video Solution

84. If $A = \{1,2,3\}$ the number of subsets of A is

A. 3

B. 8

C. 9

D. 6

Answer:



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85. Two sets A and B are said to be disjoint if

A. $A \cup B = \phi$

B. $A - B = \phi$

C. $B - A = \phi$

D. $A \cap B = \phi$

Answer:



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86. For Every set A, $A \cap \phi =$

A. ϕ

B. A

C. 0

D. 1

Answer:



Watch Video Solution

87. For every set A , Find $A \cap A =$

A. 1

B. 0

C. A

D. ϕ

Answer:



Watch Video Solution

88. If A and B are two sets, then

$$x \in A \cap B \Rightarrow$$

A. $x \in A$ or $x \in B$

B. $x \in A$ and $x \in B$

C. $x \in A$ and $x \notin B$

D. $x \notin A$ and $x \in B$

Answer:



Watch Video Solution

89. If A and B are two sets, then

$$x \in A \cup B \Rightarrow$$

A. $x \in A$ and $x \notin B$

B. $x \notin A$ and $x \in B$

C. $x \in A$ or $x \in B$

D. $x \notin A$ and $x \notin B$

Answer:



Watch Video Solution

90. If A and B are two sets, then

$$x \in A - B \Rightarrow$$

A. $x \in A$ or $x \in B$

B. $x \in A$ and $x \in B$

C. $x \notin A$ and $x \in B$

D. $x \in A$ and $x \notin B$

Answer:



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91. If $V = \{a, e, i, o, u\}$ and $B = \{a, l, k, u\}$. Find $V - B$ and $B - V$.

A. $\{a, e, i, o, u\}$

B. $\{a, e, o, u\}$

C. $\{e, o\}$

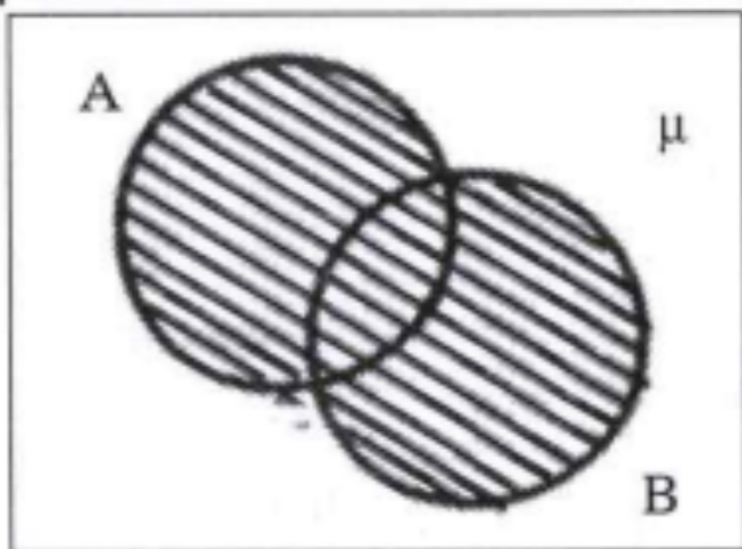
D. $\{a, e, o\}$

Answer:



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92. The shaded portion in the adjacent figure represents



A. $A \cap B$

B. $A \cup B$

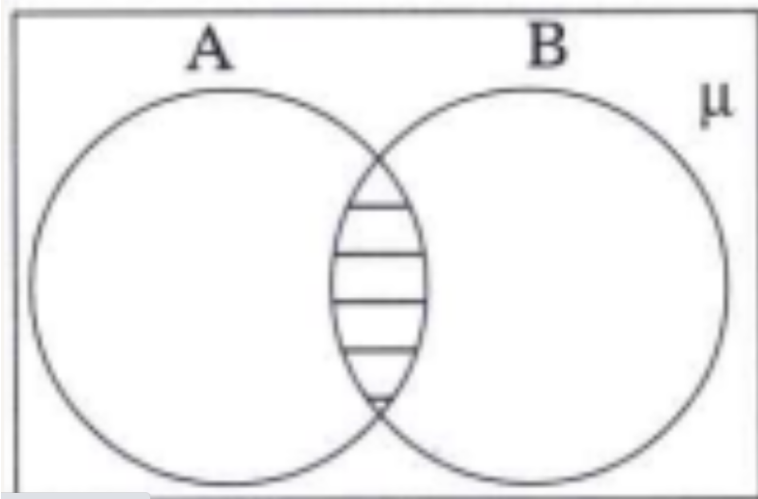
C. $A - B$

D. $A \subset B$

Answer:

 [Watch Video Solution](#)

93. The shaded portion in the adjacent figure represents



A. $A \cap B$

B. $A \cup B$

C. $A \subset B$

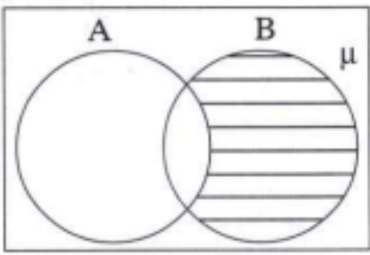
D. $B \subset A$

Answer:



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94. The shaded portion in the adjacent figure represents



A. $A \subset B$

B. $B \subset A$

C. $B - A$

D. $A - B$

Answer:



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95. Which of the following sets are equal?

A. $E = \{1,0\}, H = \{a,b\}$

B. $A = \{0,a\}, C = \{b,0\}$

C. $D = \{4,8,12\}, F = \{8,12,4\}$

D. $G = \{1,5,7,11\}, I = \{1,2,3,4\}$

Answer:



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96. If $A = \{1,3\}$ and $B = \{1,5,9\}$ then $A-B =$

A. $\{3\}$

B. $\{1\}$

C. $\{5,9\}$

D. $\{1,3,5,9\}$

Answer:



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97. Which of the following sets is infinite?

A. $\{x : x \in \mathbb{N} \text{ and } (x-1)(x-2) = 0\}$

B. $\{x : x \in \mathbb{N} \text{ and } x^2 = 9\}$

C. $\{x : x \in \mathbb{N} \text{ and } 2x-1 = 0\}$

D. $\{x : x \in \mathbb{N} \text{ and } x \text{ is odd}\}$

Answer:



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98. Which of the following sets finite?

A. $\{x : x \in \mathbb{N} \text{ and } x \text{ is prime}\}$

B. $\{x : x \in \mathbb{N} \text{ and } x \text{ is an even number less than } 20\}$

C. $\{x : x^2 = 4 \text{ and } x \text{ is an odd integer}\}$

D. $\{x : x^2 \text{ is an even prime greater than } 2\}$

Answer:



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99. Set of human being that reside on moon is

.....

A. finite set

B. null set

C. infinite set

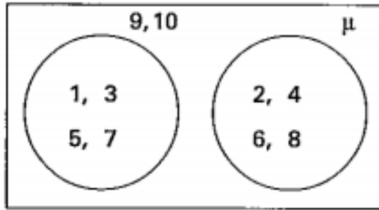
D. universal set

Answer:



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100. Which of the following is true in the following venn diagram....



A. $A \cup B = \phi$

B. $A \cup B = \mu$

C. $A \cap B = \mu$

D. $A \cap B = \phi$

Answer:

101. Which of the following is an example for finite set.....

A. $\{x / x \in N \text{ and } x^2 = 9\}$

B. set of rational numbers in between 2 and 3

C. Multiples of even primes

D. Set of all primes

Answer:



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102. The number of subsets of the null set ϕ is.....

A. 0

B. 1

C. 3

D. 4

Answer:



103. If $A=\{a,b,c,d\}$. How many subsets does the set A have?

A. 5

B. 6

C. 16

D. 65

Answer:



104. $A = \{1,2,3,7,8\}$: $B = \{4,5,6,7\}$ find $A \cap B$

A. $\{1,2,3,4,5,6,7,8\}$

B. 7

C. ϕ

D. $\{7,8\}$

Answer:



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105. $n(A) = 14$, $n(B) = 11$, $n(A \cap B) = 19$ then

$n(A \cup B) = \dots$

A. 6

B. 16

C. 22

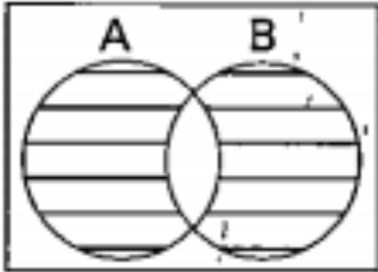
D. 25

Answer:



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106. The shaded area in the figure shows.



A. $A-B$

B. $B-A$

C. $A \Delta B$

D. $(A \cup B) \cap (A \cap B)$

Answer:



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107. IF A and B are two sets such that $A \subset B$
then, What is $A \cup B$?

A. A

B. B

C. $A \cap B$

D. None

Answer:



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108. IF A and B are disjoint sets then $n(A \cup B) =$

.....

A. 1

B. ϕ

C. 0

D. $\{ \}$

Answer:



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109. Match the following

Group – I

Group – II or

L) $A \cup B$

i) $A \cap B$

**M) $\{x : x \in A$
and $x \in B\}$**

ii) $\{x : x \in A$ and $x \notin B\}$

N) $A - B$

iii) $\{x : x \in A$ or $x \in B\}$

O) If $x \in A$

iv) $A \subset B$

A.

$L \rightarrow (iii), M \rightarrow (i), N \rightarrow (ii), O \rightarrow (iv)$

B.

$L \rightarrow (i), M \rightarrow (ii), N \rightarrow (iii), O \rightarrow (iv)$

C.

$L \rightarrow (iii), M \rightarrow (i), N \rightarrow (iv), O \rightarrow (ii)$

D.

$$L \rightarrow (iii), M \rightarrow (ii), N \rightarrow (ii), O \rightarrow (iv)$$

Answer:



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110. $A \cap \phi \neq \dots$

A. A

B. ϕ

C. $\phi - A$

D. $\{\}$

Answer:



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111. Let $A = \{1, 2, \{1\}, \{1, 2\}, 3, 4\}$, then which of the following is true?

A. $\{3\} \in A$

B. $\{1, 3\} \in A$

C. $\{1, 2\} \in A$

D. None

Answer:



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112. Which of the following is false?

A. $\{1\} \in A$

B. $\{1, 2\} \subseteq A$

C. $\{1, 2\} \in A$

D. None

Answer:



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113. IF $A=\{1,2,3,4\}$, $B=\{2,4,6,8\}$, then $A-B=.....$

A. $\{6,8\}$

B. $\{1,2\}$

C. $\{1,3\}$

D. None

Answer:



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114. If $n(A \cup B) = 8$, $n(A) = 6$, $n(B) = 4$ then $n(A \cap B) = \dots\dots\dots$

A. 2

B. 4

C. 6

D. 8

Answer:



115. Let A, B are two sets such that $n(A)=5, n(B)=7$ then the maximum number of elements is $A \cup B$ is

A. 7

B. 9

C. 12

D. None

Answer:



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116. IF $A=\{1,2,3,4\}$, then the cardinality of set A is

A. 3

B. 4

C. 5

D. 6

Answer:



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117. IF A,B are disjoint sets such that $n(A)=4$ and $n(A \cup B)=7$, then $n(B)=\dots\dots\dots$

A. 4

B. 11

C. 3

D. 20

Answer:



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118. An object of a set is called

A. Subject

B. Number

C. Alphabet

D. Element

Answer:



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119. The symbol used for 'belongs to ' is

A. \subset

B. \subseteq

C. \in

D. ~~\in~~

Answer:



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120. The set of all real numbers is

A. ϕ

B. Finite set

C. infinite set

D. None

Answer:



Watch Video Solution

121. The number of elements in the empty set is

A. 0

B. ϕ

C. 1

D. $\in f \in ite$

Answer:



Watch Video Solution

122. If $A = \{1, 2, 2, 1, 3, 4, 3, 4\}$, then $n(A) =$

A. 0

B. 4

C. 8

D. 20

Answer:



Watch Video Solution

123. $A \subset B$ అయిన $A \cup B =$

A. ϕ

B. μ

C. A

D. B

Answer:



Watch Video Solution

124. $A \cap \phi = \dots$

A. ϕ

B. μ

C. A

D. A^c

Answer:



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125. The German mathematician who developed the theory of sets.....

A. Bhaskar

B. Cayley

C. George Cantor

D. None

Answer:



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126. A set is aof objects.

A. well defined collection

B. collection

C. elements

D. none

Answer:



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127. The objects in the set are called..... Of the set

A. elements

B. members

C. both A & B

D.

Answer:



128. Roster form of the set of natural number less than 6 is.....

A. {4,5,6}

B. {1,2,3}

C. {2,3,4}

D. {1,2,3,4,5}

Answer:



129. The set formed the letter of the word "SCHOOL" is.....

A. {S,O,H}

B. {H,O,L}

C. {S,C,H}

D. {S,C,H,O,L}

Answer:



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130. Roster form is also called..... Form.

A. list

B. set

C. number

D. none

Answer:



Watch Video Solution

131. Describing a set by same property common to all its elements is called.....or.....

A. set builder form

B. rule form

C. both A & B

D. none

Answer:



Watch Video Solution

132. $A = \{2, 4, 6, 8, 10\}$ then its rule form is.....

A. $A = \{x^2 / x \in \mathbb{N}\}$

B. $A = \{2x / x \text{ is odd, } x \leq 20\}$

C. $A = \{x^3 / x \in \mathbb{N}\}$

D. $A = \{x / x \text{ is an even number, } x \leq 10\}$

Answer:



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133. IF $B = \{1, 7, 2, 0, 6\}$ then $n(B) = \dots\dots\dots$

A. 5

B. 6

C. 7

D. 9

Answer:



Watch Video Solution

134. $n(\phi) =$

A. n

B. ϕ

C. 0

D. 9

Answer:



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135. Every set isof itself

A. subset

B. proper set

C. power set

D. none

Answer:



Watch Video Solution

136. IF $A \subset B$ and $A \neq B$ then 'A' is called theof B.

A. subset

B. proper subset

C. power set

D. none

Answer:



Watch Video Solution

137. In set Builder form, the letter x denotes any.....that belongs to the set.

A. constant

B. element

C. arbitrary element

D. none

Answer:



Watch Video Solution

138. In the rule form, the slant bar stands for.....

A. subset

B. such that

C. belongs

D. all

Answer:



Watch Video Solution

139. 2 is.....of set of natural numbers.

A. power

B. proper

C. subset

D. an element

Answer:



Watch Video Solution

140. – 3 is..... Of the set of whole numbers.

A. proper

B. power

C. element

D. not an element

Answer:



Watch Video Solution

141. 0.....to set of whole numbers.

A. does not belong

B. belong

C. subset

D. power set

Answer:



Watch Video Solution

142. $A = \{1, 2, 7, 10\}$ then $7 \dots \dots \dots A$.

A. \subset

B. \in

C. ~~\in~~

D. none

Answer:



Watch Video Solution

143. $A = \{1, 2, 7, 10\}$ then $4 \dots \dots \dots A$.

A. \supset

B. \in

C. \subset

D. \notin

Answer:



Watch Video Solution

144. "0 does not belong to the set of natural numbers" we write the statement symbolically as.....

A. $0 \notin N$

B. $0 \in N$

C. $0 \subset N$

D. none

Answer:



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145. Set builder form of

$$D = \left\{ 1, \frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{1}{5}, \frac{1}{6} \right\} \text{ is.....}$$

A. $k = \left\{ \frac{x}{x} = \frac{1}{n^3}, n \in N \right\}$

B. $D = \left\{ \frac{x}{x} = \frac{1}{n}, n \in N, n < 7 \right\}$

$$C. D = \left\{ \frac{x^2}{X} = \frac{1}{k^2}, k = 1 \right\}$$

$$D. k = \left\{ \frac{x}{x} = \frac{1}{n^2}, n \in N \right\}$$

Answer:



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$$146. B = \left\{ \frac{x^2}{x} + 3 = 6 \right\}, B = \dots\dots\dots$$

A. {0,1,3}

B. (7,0}

C. {0,3}

D. {3}

Answer:



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147. A.....is a set with no elements in it.

A. infinite set

B. Finite set

C. null set

D. none

Answer:



Watch Video Solution

148. The null set is sometimes denoted as.....

- A. empty set
- B. void set
- C. both A & B
- D. none

Answer:



Watch Video Solution

149. Empty set is denoted by.....

A. $\{\phi\}$

B. $\{0\}$

C. N

D. ϕ

Answer:



Watch Video Solution

150. $\{0\}$ is a set contains the element.....

A. 0

B. ϕ

C. $\{\phi\}$

D. none

Answer:



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151. A set with only one element is known as.....set.

A. Double

B. Singleton

C. Tri

D. none

Answer:



Watch Video Solution

152. Number of elements in a singleton set is.....

A. 0

B. 2

C. 7

D. 1

Answer:



Watch Video Solution

153. $A = \{x \mid x+4=4\}$ then $A=$

A. $\{4\}$

B. $\{0\}$

C. $\{0,4\}$

D. $\{0,7\}$

Answer:



Watch Video Solution

154. $B = \{x / x \in N \text{ and } x < 1000\}$ is a
.....set.

A. finite

B. infinite

C. singleton

D. empty

Answer:



Watch Video Solution

155. If in two sets A and B , every element if A is in B and every element of B is in A. then we write it as.....

A. $A \neq B$

B. $A \subset B$

C. $A \supset B$

D. $A = B$

Answer:



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156. $A \neq B$ means, set A and B do not contains same elements. This is.....



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157. The number of elements in a set is called.....of the set.

A. cardinal

B. ordinal

C. 1

D. all the above

Answer:



Watch Video Solution

158. IF $B = \{1, 7, 2, 0, 6\}$ then $n(B) = \dots\dots\dots$

A. 7

B. 0

C. 6

D. 5

Answer:



Watch Video Solution

159. IF every element of A is also an element of B then we write this as.....

A. $A \cap B$

B. $B \cap A$

C. $A \subset B$

D. $B \subset A$

Answer:



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160. IF $A=\{1,2,3\}$ and $B=\{1,2,3,4\}$ then we say A is a.....of B.

A. subset

B. superset

C. equal

D. none

Answer:



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161. A is not a subset of B if A containswhich is not in B.

A. equal

B. at least one element

C. 2

D. none

Answer:



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162. $\{x / x \text{ is a student of your school } \}$ is in
.....form.

- A. Roster
- B. Singleton
- C. at least one element
- D. None

Answer:



Watch Video Solution

163. $\{2,4,6,8,10\}$ is an example of.....set.

A. finite

B. infinite

C. singleton

D. two

Answer:



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164. $\{x / x \text{ is a natural number}\}$ is a.....set.

A. finite

B. infinite

C. singleton

D. none

Answer:



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165. $\{x / x \neq x\}$ is aset.

A. empty

B. infinite

C. singleton

D. none

Answer:



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166. $A = \{1, 2, 3\}$, $B = \{3, 4, 5\}$ then $A \cap B = \dots\dots$

A. 3

B. $\{1,2\}$

C. $\{4,5\}$

D. $\{3\}$

Answer:



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167. $A=\{a,b,c\}, B=\{c,a,b\}$ then.....

A. $A \neq B$

B. $A = B$

C. $A \subset B$

D. none

Answer:



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168. $A=\{1,2,7\}$, $B=\{2,1\}$ then.....

A. $A \subset B$

B. $B \subset A$

C. $A = B$

D. none

Answer:



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169. $A \subset B$ then $A-B=.....$

A. \subset

B. B

C. A

D. ϕ

Answer:



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170. $A - \phi = \dots\dots\dots$

A. A

B. ϕ

C. μ

D. none

Answer:



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171. $A \cup A =$

A. ϕ

B. μ

C. A

D. A

Answer:



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172. $\mu = \dots\dots$

A. A

B. μ

C. ϕ

D. none

Answer:



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173. $A = \{1, 2, 3\}$, $B = \{12, 0, 5\}$ then $A - B = \dots\dots\dots$

A. B

B. A

C. $\{5\}$

D. none

Answer:



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174. $A \cup \phi = \dots$

A. A

B. B

C. ϕ

D. μ

Answer:



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175. $\phi = \dots\dots\dots$

A. B

B. A

C. μ

D. 0

Answer:



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176. $\{2, 6, 10\} \cap \{8, 9, 11, 12, 13\} = \dots\dots\dots$

A. $\{2\}$

B. $\{1,2\}$

C. $\{13,1\}$

D. ϕ

Answer:



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177. $n(A)=4$ then $n(p(A))=.....$

A. 12

B. 13

C. 15

D. 16

Answer:



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178. $A - (A - B) = \dots\dots\dots$

A. $A \cap B$

B. ϕ

C. $A \cup B$

D. B

Answer:



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179. $(A')' = \dots$

A. A'

B. A

C. ϕ

D. none

Answer:



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180. IF $A \subset B$, then $A-B=.....$

A. μ

B. B

C. A

D. ϕ

Answer:



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181. IF $A \subset B$ then $A \cup (B-A) = \dots\dots\dots$

A. B

B. A

C. ϕ

D. none

Answer:



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182. $W - \{0\} = \dots\dots\dots$

A. R

B. N

C. Z

D. Q

Answer:



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183. $A \subset B$ అయి $B \subset C$ అయిన

A. $B = C$

B. $A = B$

C. $C \subset A$

D. $A \subset C$

Answer:



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184. Cardinal number of null set is.....

A. 4

B. ϕ

C. 0

D. none

Answer:



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185. $A'-B' = \dots$

A. $A-B'$

B. $A'-B$

C. $B-A$

D. $A-B$

Answer:



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186. IF $A=\{1,2,3\}$, $B=\{3,4,5\}$ then $A \Delta B=.....$

A. $\{0\}$

B. $\{1,2\}$

C. $\{7\}$

D. none

Answer:



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187. $A = \phi$, $B = \phi$ then $A \cup B = \dots\dots\dots$

A. μ

B. ϕ

C. can't be determined

D. none

Answer:



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188. $A \cap B = \phi$ then $n(A \cap B) = \dots\dots\dots$

A. 7

B. 9

C. 3

D. none

Answer:



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189. $A \cup B = A \cap B$ then

A. $A = B$

B. $A \neq B$

C. $A \subset B$

D. $B \subset C$

Answer:



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190. $\mu = \phi$ is called ...law.

A. Identity

B. Associative

C. Inverse

D. Complementary

Answer:



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191. $A'=B$ then $A \cup B = \dots\dots\dots$

A. A

B. μ

C. ϕ

D. none

Answer:



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192. $\phi \Delta \phi = \dots\dots\dots$

A. μ

B. ϕ

C. $\{0\}$

D. none

Answer:



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193. $A \cup B = B \cup A$ is called.....law.

A. idempotent

B. inverse

C. complete

D. identity

Answer:



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194. $A \cup B = B$ if.....

A. $A \supset B$

B. $A \subset B$

C. $A = B$

D. none

Answer:



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195. $A = \phi, B = \phi$, then $A \cap B = \dots\dots\dots$

A. $\{6,1\}$

B. $\{0\}$

C. μ

D. ϕ

Answer:



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196. $n(A)=10, n(B)=4, n(A \cap B)=2$ then $n(A \cup B)=$

A. 11

B. 16

C. 10

D. 12

Answer:



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197. $(A \cup B)' = \dots$

A. $A' \cap B'$

B. $A' \cup B$

C. $A' \cap B$

D. $A \cap B$

Answer:



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198. $(A - B) \cup (A - C) = \dots$

A. $(A - B) \cup C$

B. $(A - B) \cap C$

C. $(A - B) - C$

D. none

Answer:



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199. $n(A)=3$ then number of proper subsets of A is.....

A. 10

B. 9

C. 7

D. 8

Answer:



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200. $A \cap B = \phi$ then $B \cap A = \dots\dots\dots$

A. μ

B. A

C. ϕ

D. B

Answer:



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201. $A \cup (B \cap C) = \dots\dots$

A. $(A \cup B) \cap (A \cup C)$

B. $(A \cap C) \cup (A \cap C)$

C. $(A \cup B) \cap C$

D. none

Answer:



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202. $A = \{\text{all primes less than } 20\}$

$B = \{\text{all whole numbers less than } 10\}$ then

$A \cap B = \dots\dots\dots$

A. $\{2,3,5,7,10\}$

B. $\{2,8,9\}$

C. $\{2,3,5,7\}$

D. $\{2,4,6\}$

Answer:



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203. $n(A \cup B)=51$, $n(A)=20$, $n(A \cap B)=13$, then n
 $(B)=\dots\dots\dots$

A. 80

B. 44

C. 40

D. 39

Answer:



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204. The identity element under union of sets
of

A. μ

B. $\{0\}$

C. ϕ

D. none

Answer:



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205. $\mu \cup \phi = \dots\dots\dots$

A. ϕ

B. $\{0\}$

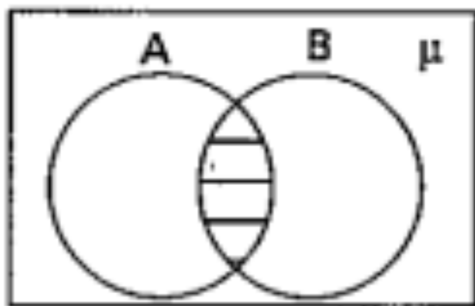
C. $\{\phi\}$

D. μ

Answer:



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206.

This Venn-diagram represents.....

A. $A \cap B$

B. $A - B$

C. $A \cup B$

D. $A \Delta B$

Answer:



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207. $N \cap W = \dots$

A. Q

B. W

C. N

D. {0}

Answer:



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208. IF A and B are disjoint sets then $n(A \cup B) =$

.....

A. $n(A) - n(B)$

B. $n(A)+n(B)$

C. $\frac{n(A)}{n(B)}$

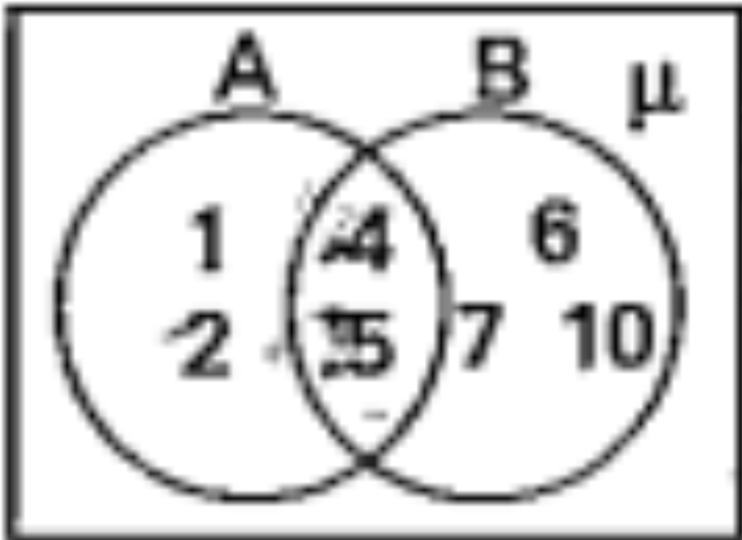
D. none

Answer:



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209. From the Venn diagram $A \cup B = \dots$



A. {1,2,3}

B. {1,2,4,5}

C. {6,7,10}

D. none

Answer:



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210. Identity element under intersection of sets is.....

A. $\{0\}$

B. μ

C. ϕ

D. none

Answer:



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211. Which of the following is true?

A. $A - B \neq B - A$

B. $A \cup \phi = A'$

C. $\mu' = \mu$

D. all

Answer:



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212. A is the set of factors of 12. Which are of the following is not a member of A?

A. 9

B. 10

C. 12

D. 5

Answer:



213. IF the number of proper subsets of a given set is 31 then the set contains elements.

A. 7

B. 6

C. 5

D. 10

Answer:



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214. Write in the form of set?

The collection of all months of a year beginning with 'A'.



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215. Which of the following are sets?

The collection of teachers in a school .



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216. Which of the following are sets?

The collection of first five square numbers.



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217. Which of the following are sets?

The collection of talented boys in a class.



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218. Write the following sets in the set-builder form.

$\{3,6,9,12\}$



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219. Write the following sets in the Set-Builder form.

$B = \{2,4,8,16\}$



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220. Write the following sets in the Set-Builder form.

$$C = \{ 1,2,3,4,5,6,7\}$$



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221. Write the following sets in the Set-Builder form.

$$D = \{\text{Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday}\}$$



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222. If $A = \{1,2,3,4,5,6\}$, $B = \{5,6,7,8,9\}$ then find $A-B$ and $B-A$.



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223. If $n(A) = 35$, $n(B) = 20$ and $n(A \cup B) = 51$
find $n(A \cap B)$



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224. Which of the following sets is finite or infinite.

$$A = \{x : x \in \mathbb{N} \text{ and } x > 10\}$$



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225. Which of the following sets is finite or infinite.

$$B = \{x : x \in \mathbb{N} \text{ and } x \leq 8\}$$



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226. Which of the following sets is finite or infinite.

$$C = \{ 1^4, 2^4, 3^4, 4^4, \dots \}$$



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227. Which of the following sets is finite or infinite.

$$D = \{ x : x \text{ is a number multiples of } 4 \text{ and } \leq 20 \}$$



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228. If $A \cup B = A \cup C$ and $A \cap B = A \cap C$,
then

A. $B \subseteq C$

B. $A = B = C$

C. $B = C$

D. $B \subseteq C \subseteq A$

Answer:



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229. The set formed the letter of the word "SCHOOL" is.....

A. {S,O,H}

B. {H,O,L}

C. {S,C,H}

D. {S,C,H,O,L}

Answer:



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230. Roster form is also called..... Form.

A. list

B. set

C. number

D. none

Answer:



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231. $K = \{x / x \text{ is a prime number less than } 13\}$

list from of K is.....

A. $\{5,7,11\}$

B. $\{2,3,5,7,11\}$

C. $\{1,3,5\}$

D. None

Answer:



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232. IF $B = \{1, 7, 2, 0, 6\}$ then $n(B) = \dots\dots\dots$

A. 5

B. 6

C. 7

D. 9

Answer:



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233. Roster form of the set of multiples of 5 which lie between 25 and 50 is.....

A. {60,70,80}

B. {20,30,45}

C. {30,35,40,45}

D. NOne

Answer:



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234. -4 is.....of the set of natural numbers.

A. does not belong

B. belong

C. power

D. none

Answer:



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235. Collection of five scholars in your city is.....

A. a set

B. not a set

C. can't be determined

D. none

Answer:



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236. $A = \{1, 2, 4\}$, $B = \{3, 5, 6\}$ then.....

A. $A \cap B = \phi$

B. $A \cup B = \phi$

C. $A \cap B = \{3\}$

D. none

Answer:



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237. $A \subset B$ then $A - B = \dots\dots\dots$

A. \subset

B. B

C. A

D. ϕ

Answer:



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238. $A \Delta B = \dots\dots\dots$

A. $(A - B) \cup (B - A)$

B. $(A \cap B) - (B \cap A)$

C. both A & B

D. A-B

Answer:



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239. $A \cup B = B \cup A$ is called.....law.

A. inverse

B. commutative

C. identity

D. none

Answer:



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240. $A \cap B = \phi$ then $B \cap A' = \dots$

A. μ

B. A

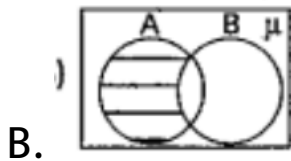
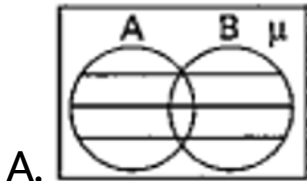
C. ϕ

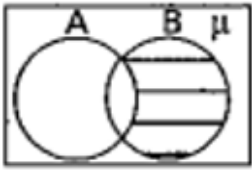
D. B

Answer:

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241. Which of the following represents $A-B$?





C.

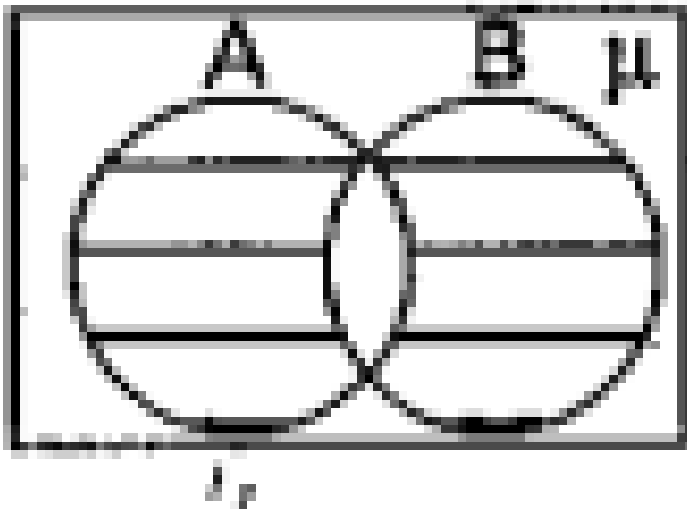
D. all

Answer:



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242. The given Venn-diagram represents....



A. $A \Delta B$

B. $A - B$

C. $B - A$

D. all

Answer:



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243. The intersection of set of rational number and set of irrational numbers is

- A. real numbers
- B. natural numbers
- C. whole numbers
- D. integers

Answer:



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244. $A = \{0\}$ $B = \{1,2,3,4,5\}$ $C = \{1,5,6,7\}$ then find the $A-C, C-B, A \cap B, A \cup (B \cap C)$



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245. If $P = \{x / x \text{ is a odd number less than } 14\}$

Then list of P.



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246. If $Z = \{x / x \text{ is a months of year}\}$ Then list of Z.



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247. If $A = \{1,2,3\}$, $B = \{4,5\}$ Then $A \cup B = \dots$

A. $\{1,2,3\}$

B. $\{1,2,3,4,5\}$

C. ϕ

D. {5,6}

Answer:



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