MATHS

BOOKS - CENGAGE MATHS (HINGLISH)

SETS AND RELATIONS

Question Bank

1. If $A = \{x \mid x \in N.$ and $x < 6\frac{1}{4}\}$ and $B = \{x \mid x \in N$ and $. x^2 \leq 5\}.$ Then the

number of subsets of set $Ax(A \cap B)$ which contains 3 elements is

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2. Let $A = \{a, b, c, d\}, B = \{b, c, d, e\}$. Then n[(A xx B)nn(Bxx A) equals to

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3. Let $n(U) = 700, n(A) = 200, n(B) = 300$ and $n(A \cap B) = 100$ then ` n(A^{c} nn B^{c})

is

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4. If for three disjoint sets $A, B, C, n(A) = 10, n(B) = 6$ and $n(C) = 5$, then $n(A \cup B \cup C)$ is equal to

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5. If $A = \{1, 2, 3, 4, 5\}$, then the number of proper subsets of A is

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6. Given the relation $R = \{(1, 2), (2, 3)\}$ on the set $A = \{1, 2, 3\}$, the minimum number of ordered pairs which when added to R make it an equivalence relation is

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7. If $B = \{1, 2, 3\}$, and $A = \{3, 8\}$ then number of pair of $(B \cup A) \times (B \cap A)$ is

equal to

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8. Write the relation $R = \{(x, x^2)..$, where x is an odd.natural number less than $7\}$. Find the number of relation.

A. 2

B. 3

C. 4

D. 5

Answer: B

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9. Let $*beab \in aryoperationdef \in edby$a^{*} b=2 a+b-3. $F \in d3$^{*} 4`.

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10. Let $A = \{1, 3, 5, 7\}$ and $B = \{2, 4, 6, 8\}$ be two sets and let R be a relation from A to B defined by the phrase $(x, y) \in R \leftrightarrow x > y$

Find the number of ordered pairs under this relation R,

A. 8

B. 10

C. 6

D. 4

Answer: C

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11. Let set $A = \{3, 6, 9, 12\}$. Then find number of ordered pairs which when added to R make it reflexive and transitive relation

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12. If $A = \{1, 2, 3\}, B = \{1, 4, 6, 9\}$ and R is a relation from A to B defined by x is greater than y'. The range of R is

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13. Let set $A = \{1, 2, 3\}$. Then find number of ordered pairs which when added to R make it reflexive but not symmetric

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14. If R be a relation $<$ ' from $A = \{1, 2, 3, 4\}$ to $B = \{1, 3, 5\}$ i.e. $(a, b) \in R$ iff `a

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15. The number of reflexive relation in set $A = \{a, b, c\}$ is equal to

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