

THE VILLAGE INTERNATIONAL SCHOOL

RECAP ACTIVITY – RELATIONS

1. If $(x + 1, y - 2) = (3, 1)$, find the values of x and y
2. If $P = \{a, b, c\}$ and $Q = \{r\}$, form the sets $P \times Q$ and $Q \times P$.
3. If the set A has 3 elements and the set $B = \{3, 4, 5\}$, then find the number of elements in $(A \times B)$.
4. Let A and B be two sets such that $n(A) = 3$ and $n(B) = 2$. If $(x, 1)$, $(y, 2)$, $(z, 1)$ are in $A \times B$, find A and B , where x , y and z are distinct elements.
5. Let $A = \{1, 2, 3, 4, 5, 6\}$. Define a relation R from A to A by $R = \{(x, y) : y = x + 1\}$ (i) Depict this relation using an arrow diagram. (ii) Write down the domain, codomain and range of R .
6. Determine the domain and range of the relation R defined by $R = \{(x, x + 5) : x \in \{0, 1, 2, 3, 4, 5\}\}$.
7. Let $A = \{x, y, z\}$ and $B = \{1, 2\}$. Find the number of relations from A to B .
8. If $A = \{1, 4, 8, 9\}$ and $B = \{1, 2, -1, -2, -3, 3, 5\}$ and R is a relation from set A to set B $\{(x, y) : x = y^2\}$. Write R in roster form.

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