Then, $S_p = \{ 6k + p : p = 0, 1, 2, 3, 4, 5 \text{ and } k = 0, \pm 1, \pm 2, \cdots \}$

$S_0 = \{ \cdots -12, -6, 0, 6, 12, \cdots \}$

$S_1 = \{ \cdots -11, -5, 1, 7, 13, \cdots \}$

$S_2 = \{ \cdots -10, -4, 2, 8, 14, \cdots \}$

$S_3 = \{ \cdots, -9, -3, 3, 9, 15, \cdots \}$

$S_4 = \{ \cdots, -8, -2, 4, 10, 16, \cdots \}$

$S_5 = \{ \cdots, -7, -1, 5, 11, 17, \cdots \}$

$P = \{ S_0, S_1, S_2, S_3, S_4, S_5 \}$ is the partition of $\mathbb{Z}$

(i) $S_i \cap S_j = \phi$, $\forall i, j = 0, 1, \cdots 5$, $i \neq j$

(ii) $\bigcup_{i=0}^{5} S_i = \mathbb{Z}$.