4d. $X[1\ldots5]$; $X[1]=2$, $X[2]=1$, $X[3]=3$
$X[4]=7$, $X[5]=3$

and $V := \{1,2,3,4,5\}$

a. $\max\{X[i]+i \mid i \in V\} = 10$

The set of $\{X[i]+i \mid i \in V\} = \{3, 6, 8, 11\}$

So the $\max\{X[i]+i \mid i \in V\} = \max\{3,6,8,11\} = 11$

Consiquently $\max\{X[i]+i \mid i \in V\} = 10$ is false

b. $\min\{X[i] \mid i \in V \setminus \{4\}\} = \max\{X[i] \mid i \in \{1,2,3\}\}$

$\{X[i] \mid i \in V \setminus \{4\}\} = \{1,2,3\}$; $\min\{1,2,3\} = 1$

$\{X[i] \mid i \in \{1,2,3\}\} = \{1,2,3\}$; $\max\{1,2,3\} = 3$

So

$\min\{X[i] \mid i \in V \setminus \{4\}\} \neq \max\{X[i] \mid i \in \{1,2,3\}\}$ is false

c. $\max\{X[i] \mid i \in V \wedge X[i]\}$ is odd

$\{X[i] \mid i \in V \wedge X[i]\} = \{1,2,3\}$; $\max\{3\} = 3$

$\max\{X[i] \mid i \in V \wedge X[i]\}$ is odd is true