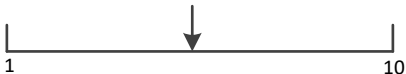
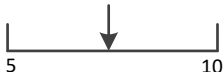
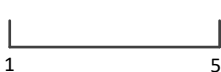


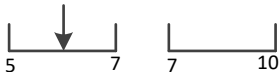
$[1,10)$ test $m=5$.



$[5,10)$ test $m=7$.



$[5,7)$ test $m=6$.



$[6,7)$ 6 is optimal solution

