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Analyzing Congress

Answers to Chapter 1 Problems

1.
 - a. $G=57$.
Line up the ideal points in order: 16, 22, 25, 57, 63, 100, 200. With 7 committee members, the median is number 4, which corresponds with the value 57.
 - b. $F = 63$.
Line up the ideal points in order: 16, 22, 25, 63, 75, 100, 200. With 7 committee members, the median is number 4, which corresponds with the value 63.
 - c. $C = G = 57$
Line up the ideal points in order: 16, 22, 57, 57, 63, 100, 200. With 7 committee members, the median is number 4, which corresponds with the value 63.
 - d. $C=25$ and $F=63$ define a “median interval.”
Line up the ideal points in order: 16, 22, 25, 63, 100, 200. With 6 committee members, the median will lie between members 3 and 4, which corresponds with the values 25 and 63. Note here that if the status quo is in the closed interval $[25,63]$ (i.e., including 25 and 63), then no other alternative motion within the interval will win a majority of votes, which in this case is 4. Full credit for any mention of the interval, even if it’s not exactly this answer. No credit for splitting the difference.
 - e. $C=25$ and $G=57$ define a “median interval.”
Line up the ideal points in order: 16, 22, 22, 25, 57, 63, 100, 200. With 8 committee members, the median will lie between members 4 and 5, which corresponds with values 25 and 57. Note here that if the status quo is in the closed interval $[25, 57]$ (i.e., including 25 and 57), then no other alternative motion within the interval will win a majority of votes, which in this case is 5. Full credit for any mention of the interval, even if it’s not exactly this answer. No credit for splitting the difference.
2. Note that in general this question involves lining up each committee in order of its ideal points and then either seeing (a) which alternative is closer to the median or (b) whether one of the alternatives is in the median interval.
 - a. $X=60$
Line up the ideal points in order: 16, 22, 25, 57, 63, 100, 200. The median corresponds with value 57. $X=60$ is closer to $G=57$ than $Y=65$.
 - b. $Y=65$

Line up the ideal points in order: 16, 22, 25, 63, 75, 100, 200. The median corresponds with value 63. $Y=65$ is closer to $F=63$ than $X=60$.

c. $X=60$

Line up the ideal points in order: 16, 22, 57, 57, 63, 100, 200. The median value corresponds with 57. $X=60$ is closer to $C=G=57$ than to $Y=65$.

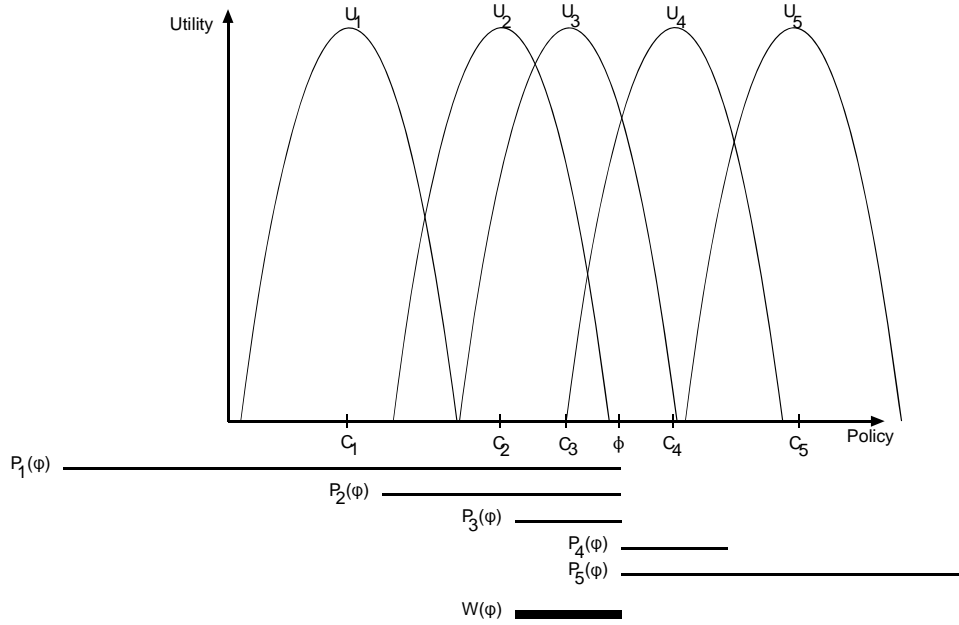
d. Tie

Line up the ideal points in order: 16, 22, 25, 63, 100, 200. With 6 committee members, the median will lie between members 3 and 4, which corresponds with the values $C=25$ and $F=63$. $D=16$, $E=22$, and $C=25$ clearly prefer $X=60$ to $Y=65$. $B=100$ and $A=200$ clearly prefer $Y=65$ to $X=60$. What about $F=63$? $F=63$ prefers $X=65$ to $X=60$. So, it's a tie.

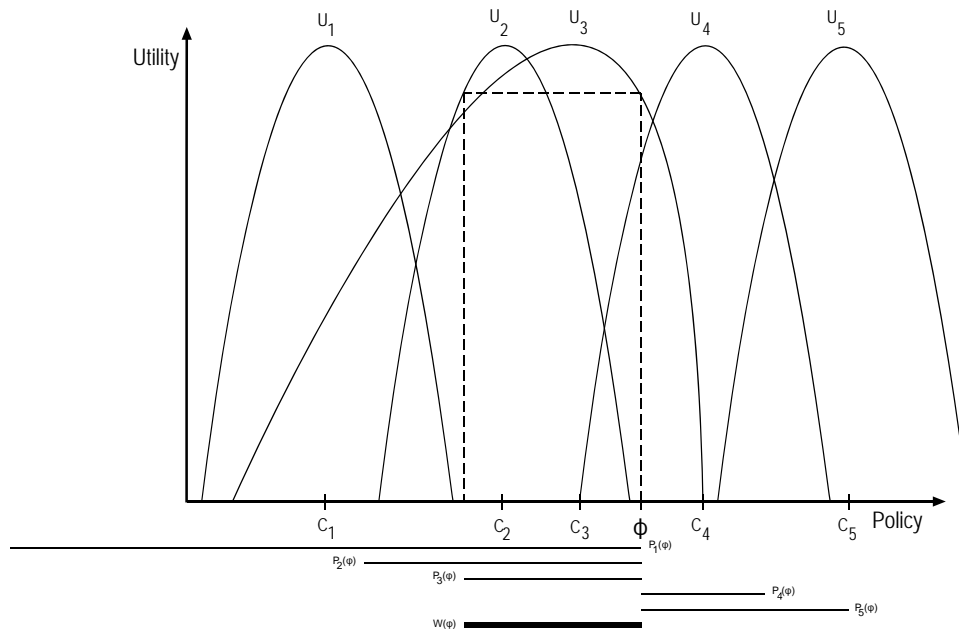
e. $X=60$

Line up the ideal points in order: 16, 22, 22, 25, 57, 63, 100, 200. With 8 committee members, the median will lie between members 4 and 5, which corresponds with values 25 and 57. Note that the value $X=60$ is closer to the median interval than $Y=65$. $X=60$ is favored by the 5 left-most members and $Y=65$ is favored by the 3 right-most members.

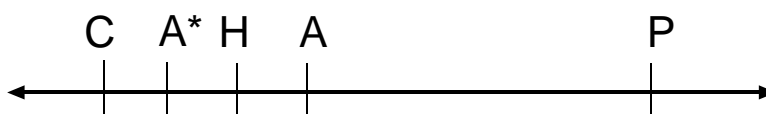
3. On the accompanying figure I have indicated the five "preferred-to sets" of each member of the committee. The "preferred-to set" is the set of all points that the indicated member prefers, compared to the status quo. For instance, $P_1(\varphi)$ is member 1's preferred-to set. The win set, $W(\varphi)$, is the intersection of three or more of the preferred-to sets. That is indicated with the bold line. Note that this corresponds precisely with $P_3(\varphi)$, the median voter's preferred-to set.



4. Note how the utility curves in this problem compare with those in Problem 3. In particular, the utility curve of Member 3 is asymmetrical. As before, I have indicated the five “preferred-to sets” of each member of the committee. Because the preferred-to set of C_3 is asymmetrical, I explicitly show how to construct it. The dashed line goes up vertically from ϕ until it intersects with U_3 . It then proceeds left until it intersects with U_3 again. Then the dashed line proceeds directly down. This constructs the preferred-to set. The win set, $W(\phi)$, is the intersection of three or more of the preferred-to sets. That is indicated with the bold line. Note that this corresponds precisely with $P_3(\phi)$. Also notes that this win set skews further to the left, compared to question 3.



- 11a With an open rule, the House will operate under pure majority rule when the bill is moved to the floor. Therefore, the final bill will be at H .
- 11b With a closed rule, the House votes on a bill on a take-it-or-leave-it fashion. The committee therefore needs to report a bill that the House will support while making the committee better off, too. The committee can't report its ideal point because the House prefers A over C . However, there is a point, A^* , that is equidistant to H , only now it's on the "committee side" of H . H prefers this to A . The committee reports a bill located at A^* , which passes.



- 11c Note that A is in the contract curve between H and P . Therefore, no policy change can occur that will make both the president and the House better off. Any bill that H would support, the president would veto. No bill.