| TABLE A-7 |  | Critical Values for the Sign Test |   |  |  |   |
|-----------|--|-----------------------------------|---|--|--|---|
| α         |  |                                   |   |  |  |   |
| n         | .005<br>(one tail)<br>.01<br>(two tails) |                                   | .01<br>(one tail)<br>.02<br>(two tails) |  | .025<br>(one tail)<br>.05<br>(two tails) | .05<br>(one tail)<br>.10<br>(two tails) |
| n n       | (two tans)                               |                                   | (two talls)                             |  | (two tans)                               | (two tans)                              |
| 1         | *  |                                   | *                                       |  | *  | *                                       |
| 2         | *  |                                   | *                                       |  | *  | *                                       |
| 3         | *  |                                   | *                                       |  | *  | *                                       |
| 4         | *  |                                   | *                                       |  | *  | *                                       |
| 5         | *  |                                   | *                                       |  | *  | 0                                       |
| 6         | *  |                                   | *                                       |  | 0  | 0                                       |
| 7         | *  |                                   | 0                                       |  | 0  | 0                                       |
| 8         | 0  |                                   | 0                                       |  | 0  | 1                                       |
| 9         | 0  |                                   | 0                                       |  | 1  | 1                                       |
| 10        | 0  |                                   | 0                                       |  | 1  | 1                                       |
| 11        | 0  |                                   | 1                                       |  | 1  | 2                                       |
| 12        | 1  |                                   | 1                                       |  | 2  | 2                                       |
| 13        | 1  |                                   | 1                                       |  | 2  | 3                                       |
| 14        | 1  |                                   | 2                                       |  | 2  | 3                                       |
| 15        | 2  |                                   | 2                                       |  | 3  | 3                                       |
| 16        | 2  |                                   | 2                                       |  | 3  | 4                                       |
| 17        | 2  |                                   | 3                                       |  | 4  | 4                                       |
| 18        | 3  |                                   | 3                                       |  | 4  | 5                                       |
| 19        | 3  |                                   | 4                                       |  | 4  | 5                                       |
| 20        | 3  |                                   | 4                                       |  | 5  | 5                                       |
| 21        | 4  |                                   | 4                                       |  | 5  | 6                                       |
| 22        | 4  |                                   | 5                                       |  | 5  | 6                                       |
| 23        | 4  |                                   | 5                                       |  | 6  | 7                                       |
| 24        | 5  |                                   | 5                                       |  | 6  | 7                                       |
| 25        | 5 5                                      |                                   | 6                                       |  | 7  | 7                                       |

## NOTES:

- $1.\,$  \* indicates that it is not possible to get a value in the critical region.
- 2. Reject the null hypothesis if the number of the less frequent sign (x) is less than or equal to the value in the table.
- 3. For values of n greater than 25, a normal approximation is used with

$$z = \frac{(x+0.5) - \left(\frac{n}{2}\right)}{\frac{\sqrt{n}}{2}}$$