SUBROUTINE SBRTAT

Description

This routine rotates the axes of two line segments when the slope of the first line is too close to vertical.

Routine SBPTCK checks to be sure that points entered as part of the basin boundary definition are legitimate (no crossing line segments, fully enclosed boundary, etc). SBPTCK checks that no lines cross by computing and comparing their slope and intercept. If the line is vertical in the HRAP grid system, then the slope is undefined and can not be checked. Routine SBRTAT shifts the line segment axes slightly so that the slope can be computed. Both line segments are shifted so that the angle relationship is maintained. The shifting is done only to check the line segments and does not affect the basin definition.

Calling Sequence

```
CALL SBRTAT (X1,X2,X3,X4,Y1,Y2,Y3,Y4,DIFF,ISTAT)
```

Argument List

Argument	Input/ Output	Type	Dimension	Description
X1	I/0	R*4	1	Beginning X coordinate first line segment
X2	I/0	R*4	1	Ending X coordinate first line segment
X3	I/0	R*4	1	Beginning X coordinate second line segment
X4	I/0	R*4	1	Ending X coordinate second line segment
Y1	I/0	R*4	1	Beginning Y coordinate first line segment
Y2	I/0	R*4	1	Ending Y coordinate first line segment
Y3	I/0	R*4	1	Beginning Y coordinate second line segment
Y4	I/0	R*4	1	Ending Y coordinate second line segment
DIFF	I	R*4	1	Minimum amount slope must be different from vertical

Argument	Input/ Output	Type	Dimension	Description
ISTAT	O	I*4	1	Status code: 0 = okay 1 = error