Tigger and Winnie-the-Pooh

First of all, we note that the shortest path for moving the Tigers from point A to point B will be the smallest in terms of the number of jumps.

Subtask 1. Let the Tiggers jump length be d and greater than the distance AB. Then the Tigger will be able to get from the point A to the point B in two jumps — first it jumps to the point C, separated from the points A and B at a distance of d, and then from the point C jumps to the point B. To calculate the coordinates of the point C, we first find the middle M of the segment AB, compose the vector $\overrightarrow{MT}$, perpendicular to the vector $\overrightarrow{AB}$. Then, in the direction of the vector $\overrightarrow{MT}$ from the point M, we postpone the segment MT' (vector) of length $\sqrt{d^2 - \frac{1}{4}AB^2}$. It remains to add the coordinates of the displacement MT' to the coordinates of the point M.

The implementation of this idea allows us to solve the problem by 20 points.

Subtasks 2 and 3. Let the points A and B be on a horizontal or vertical line. Then the computational formulas for finding the intermediate points that the Tiggris need to jump into are quite simple.

First we find the distance AB and check if AB is divisible without a remainder by the length of the jump d. If so, then the number of jumps is equal to the quotient of dividing AB by d, and the coordinates of intermediate jumping points are obtained from the coordinates of the point A by horizontal displacement (subtask 2) or vertical (subtask 3) by $\frac{i}{q} \cdot AB$, where i is the number of the jump, q is the quotient of dividing AB by d.

If AB is not completely divisible by d, then the total number of jumps is 2, if $AB < 2 \cdot d$, and $q = \lceil \frac{AB}{d} \rceil$, if $AB > 2 \cdot d$. (Here $\lceil x \rceil$ is the smallest integer that is not less than x.) To get from A to B, the Tigger first makes $q - 2$ jumps in a straight line AB, approaching the point B, and then, when the remaining distance to the point B is already less than $2d$, make two more jumps, as described in subtask 1, get to the point B.

The implementation of these ideas allows us to solve the problem by 70 points.

Subtasks 4. The idea of solving the problem in the general situation is the same as in subtask 2 and 3. The formulas for calculating the coordinates of intermediate jumps are slightly more complicated, since the angle of inclination of the straight line AB must be taken into account.

The implementation of these ideas in the general case allows us to solve the problem by 100 points.