

# The Distance Between (0, 2) and (4, 5)

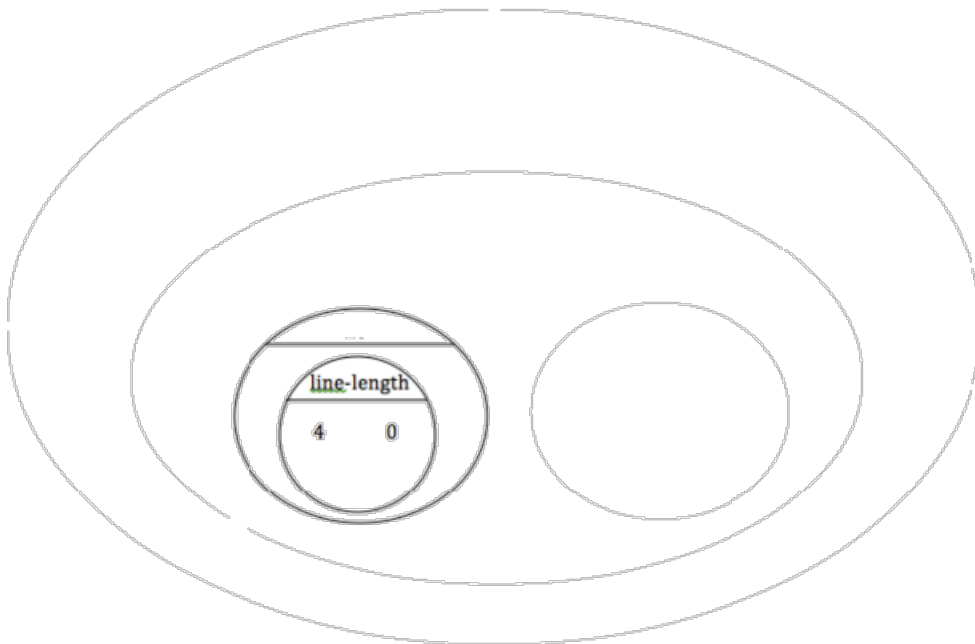
The distance between  $x_1$  and  $x_2$  is computed by `(line-length x1 x2)`. The distance between  $y_1$  and  $y_2$  is computed by `(line-length y1 y2)`. Below is the equation to compute the hypotenuse of a right triangle with those amount for legs:

$$\sqrt{\text{line-length}(x_1, x_2)^2 + \text{line-length}(y_1, y_2)^2}$$

Suppose your player is at (0, 2) and a character is at (4, 5). What is the distance between them? With your pencil, label which numbers represent  $x_1$ ,  $y_1$ ,  $x_2$  and  $y_2$ . The equation to compute the distance between these points is:

$$\sqrt{\text{line-length}(0, 4)^2 + \text{line-length}(2, 5)^2}$$

1. Translate the expression above, for (0,2) and (4,5) into a Circle of Evaluation below .



2. Convert the Circle of Evaluation to Code below .

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(sqrt (+ (sqr (line-length x1 x2)) (line-length x1 x2)))
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