

### Collision Exercise:

Given the following line segment  $L[P_0(6 ; 0), P_1(10 ; 7)]$ , representing a wall in your game, we need to check if the following moving point objects cases may collide with  $L$  in the current frame?

Each point object is moving from  $B_s$  to  $B_e$ .

To answer these questions, you need to apply the equations found in the "**Lecture 16 - Normal Line Equation - Animated Point To Line.pdf**" file, between slides 18 and 27.

Please follow these steps:

- We'll skip the first 3 non-collision tests: (1/5), (2/5) and (3/5)
- Compute  $t_i$
- If  $(0 \leq t_i \leq 1)$ , compute  $B_i$
- Test for non-collision (4/5) and (5/5). Or you can combine both test into one.

#### Case 1:

$$B_s = (5 ; 2) , \quad B_e = (7 ; 3)$$

#### Case 2:

$$B_s = (6 ; 4) , \quad B_e = (9 ; 5)$$

#### Case 3:

$$B_s = (11 ; 1) , \quad B_e = (9 ; 4)$$

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