

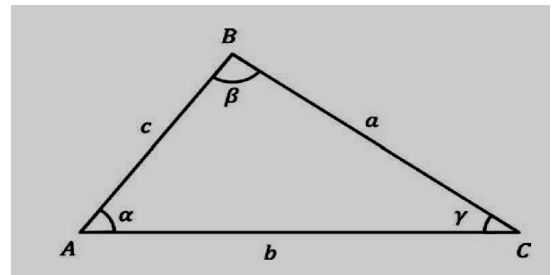
Q1) [5] Marks

List of all main 2D animation principles

Q2) [5] Marks

In the following triangle, prove that

$$a^2 = b^2 + c^2 - 2bc \cos \alpha$$

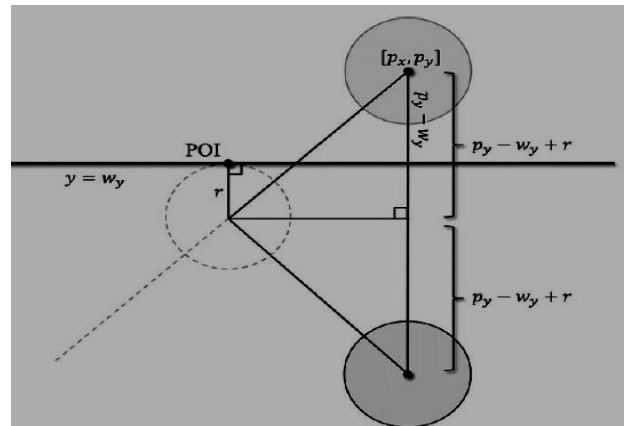
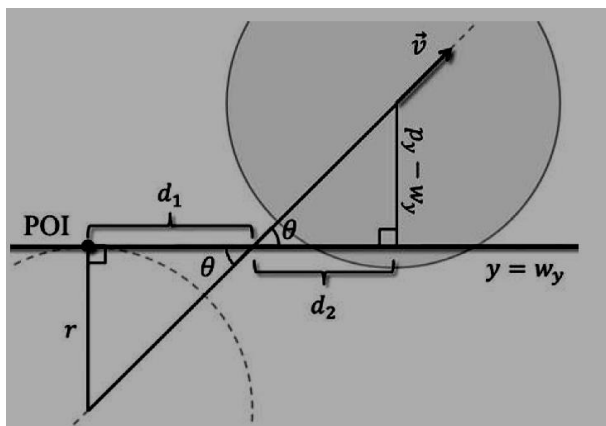


Q3) [5] Marks

In bouncing off a line, write the implementation code to reflect a vector in a line.

Q4) [10] Marks

Suppose you are animating a ball of radius r that start out below the top of the screen rolling at angle θ counterclockwise from the horizontal. You want it to bounce off the top of the screen, which has y -coordinate w_y . Suppose that it ends up at point $[p_x, p_y]$ after the first animation frame. Find the coordinates of the POI and the corrected position of the ball after bouncing off the top of the screen. Show all of your work.



End of Questions
 Good Luck