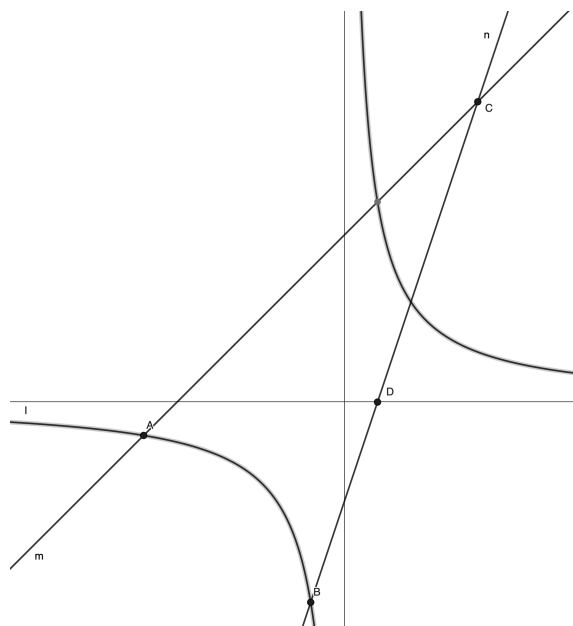


In the figure below, the equations of the three functions are:  $l : y = \frac{a}{x}$ ,  $m : y = x + 5$ ,  $n : y = 3x - 3$ .  $l$ 's intersection with  $m$  at  $x = -6$  is marked as  $A$ ,  $l$ 's intersection with  $n$  at  $y = -6$  is marked as  $B$ , the intersection of  $m$  and  $n$  is marked as  $C$ , and the intersection of  $n$  and the x-axis is marked as  $D$ . Given this information, answer the questions below.<sup>1</sup>

(1): Find the value of  $a$ .

(2): Find the coordinates of  $C$ .

(3): Let  $E$  be the point of intersection between  $AB$  and the line that passes through  $D$  and is parallel to  $m$ . Find the coordinates of  $E$ .




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<sup>1</sup>Kochi Prefecture