5.33 The end of L_1 has the following, simple projection:

$$(L_1 \cos\theta_1, L_1 \sin\theta_1)$$

Now we need to know the angle θ_3 that L_2 makes w.r.t the horizontal.

$$\theta_3 = \theta_2 - (180 - \theta_1) = (\theta_2 + \theta_1 - 180)$$

Therefore,

$$(x_1, x_2) = ((L_1 \cos\theta_1 + L_2 \cos(\theta_2 + \theta_1 - 180), L_1 \sin\theta_1 + L_2 \sin(\theta_2 + \theta_1 - 180)))$$