6. Car

1) Let us consider the force balance projected to the horizontal axes. The only force, which could create a non-zero projection, is the resultant of the friction and reaction force, applied by the corner of the delimiter. Due to the balance, this must be also zero, i.e. this resultant force is directed vertically, hence $H = \frac{d}{4}(2 - \sqrt{2}) \approx 15\,\text{cm}$.

2) Consider the torque balance with respect to the point O — the intersection point of the lines of the resultant force applied to the rear wheel by ground, and of the gravity force (vertical line through C). At the equilibrium, the line of the reaction force applied to the front wheel by the delimiter must go through the same point. Thus, the intersection point of the line OP with the wheel gives us the corner of the delimiter (P is the center of the front wheel). Using the scale of the figure yields $H \approx 10\,\text{cm}$.

3) Consider the torque balance with respect to the point Q — intersection point of the lines of the resultant forces applied to the touching points of the front- and rear wheels with the wall and floor, respectively. Only the gravity force can contribute to the net torque; since Q lies leftwards to the center of mass, this torque rotates car rising its front. So, the front will start rising.

