

## dynamics explanation

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### 1 retractable wall question

recall the free body diagram of the wall So in the normal direction

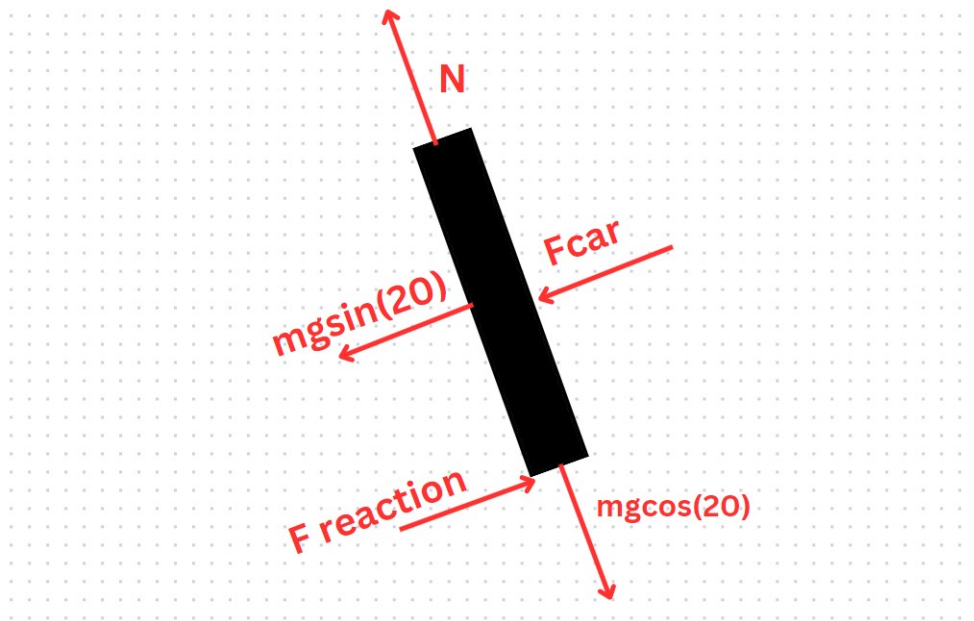


Figure 1: quality 1

$$-F_{car} - mg\sin(20) + F_{reaction} = 0 \quad (1)$$

$$F_{car} + mg\sin(20) = F_{reaction} \quad (2)$$

$$600 \times 10 \times \sin(20) + 40 \times 10 \times \sin(20) = F_{reaction} \quad (3)$$

$$2189N = F_{reaction} \quad (4)$$