**Aufgaben zur Grundgleichung der Mechanik**

1. Beschreiben Sie das Verhalten eines Fahrgastes in einem Bus bei verschiedenen Verkehrssituationen und begründen Sie das Verhalten mit dem Trägheitsprinzip.

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1. Ein Auto (m= 1000 kg) beschleunigt mit a = 5 m/s2. Welche Kraft muss dabei von den Rädern auf den Wagen übertragen werden?

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1. Ein Handballer bringt einen Ball m = 1 kg aus der Ruhe in der Zeit t = 0,5 s auf die Geschwindigkeit v = 10 m/s. Welche (durchschnittliche) Kraft übt der Handballer auf den Ball aus?

(Hinweis: Überlegt, wie die Zeit t, die Geschwindigkeit v und die Beschleunigung a zusammenhängen, um die Aufgabe zu lösen).

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