Self Check 2.4

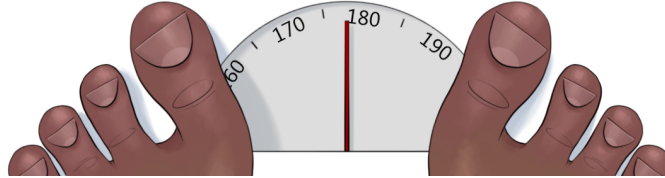**Due** No due date   **Points** 6   **Questions** 6   **Time limit** None
Allowed attempts Unlimited

Instructions

This exercise will help you check your knowledge. Please take it as many times as you need to master the concepts. Select the best answer for each question.

<div style="text-align:center">

Take the quiz again

</div>

Attempt history

	Attempt	**Time**	**Score**
KEPT	**Attempt 4**	less than 1 minute	5 out of 6
LATEST	**Attempt 4**	less than 1 minute	5 out of 6
	Attempt 3	less than 1 minute	4 out of 6
	Attempt 2	1 minute	4 out of 6
	Attempt 1	11 minutes	0 out of 6

⚠ Correct answers are hidden.

Score for this attempt: **5** out of 6
Submitted 21 Mar 2019 at 9:39
This attempt took less than 1 minute.

Use the following scenario to answer the next two questions.

A child pushes on a 2 kg toy truck with a horizontal force of 15 N. As a result, the toy truck moves with constant velocity.

Question 1   1 / 1 pts

How much normal force must there be on the toy truck?

○ 0 N

◉ 20 N

○ 30 N

○ 2 N

Feedback: $F_N = 20N$. Remember that constant velocity means the forces must be balanced.

Question 2   1 / 1 pts

How much friction must there be on the toy truck?

○ 2 N

○ 7.5

○ 30 N

◉ 15 N

Feedback: $F_f = 15N$. Remember that constant velocity means the forces must be balanced.

Use the following scenario to answer the following 3 questions.
A box is pulled across the floor at constant velocity by a 30 N horizontal tension force.

Incorrect

Question 3   0 / 1 pts

If the box weighs 50 N, what is the mass of the box?

◉ 10 kg

○ 50 kg

○ 5 kg

○ 2 kg

Feedback: m = 5 kg. Remember that $F_g = mg$, where g = 10 N/kg.

Question 4   1 / 1 pts

How much friction must be present?

○ 6 N

○ 300 N

◉ 30 N

○ 60 N

Feedback: $F_f = 30N$.

Question 5

1 / 1 pts

If the box weighs 50 N, how much normal force must be present?

○ 100 N

◉ 50 N

○ 5 N

○ 10 N

Feedback: $F_N = 50N$.

Question 6

1 / 1 pts

A boy pulls on a wagon with a 100 N force. If the handle makes a 20° angle with the horizontal, how much friction must be pulling back on the wagon in order to have constant velocity?

- ◉ 94 N

- ○ 120 N

- ○ 100 N

- ○ 5 N

Feedback: $F_f = F_{Tx} = 100cos20 = 94N$

Quiz score: **5** out of 6