Contact forces

Forces 3.1.3 | Part 2, usually Year 8 | 20 quick questions

KS3 science quick questions

Answer online, marked instantly

Activate 1: Forces; Activate 3: Forces and motion | Exploring Science 7K

Name: _____ **Date:** _____ **Score:** _____ **/ 20**

1 What is the name of the force that acts when two surfaces rub or slide over each other?

2 A cyclist feels the air pushing back on her as she rides. What is this force called? Answer in two words.

3 A tow rope is pulled tight between a car and a broken-down van. What is the name of the stretching force in the rope? Answer in one word.

4 When all the forces on an object are balanced, we say the object is in what? Answer in one word.

5 A table pushes up on a mug resting on it. What is this upward push called? Answer in two words.

6 A book rests still on a shelf. Its weight is 5 N. How big is the upward push from the shelf, in newtons?

7 In a tug of war, one team pulls left with 300 N and the other pulls right with 200 N. What is the size of the resultant force, in newtons?

8 The forces on a moving car are balanced. What happens to its speed? Answer in a few words.

9 The forward force on a skier is bigger than the backward forces. Does she speed up, slow down or keep a steady speed?

10 Name one thing you could put on a bike chain to reduce friction.

11 As a swimmer moves faster through the water, does the drag on her get bigger or smaller?

12 Squashing, stretching or bending an object changes its shape. What is this change called? Answer in one word.

13 When you stretch a spring, what do we call the increase in its length? Answer in one word.

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14 What is the name of the law that says the extension of a spring is proportional to the force on it?

15 A spring stretches by 2 cm when a 1 N weight hangs on it. It follows Hooke's law. How far does it stretch with a 3 N weight, in cm?

Year 9 stretch

16 A spring is 10 cm long. When a 4 N load hangs on it, it becomes 18 cm long. What is its extension, in cm?

17 The same spring (10 cm long, 8 cm extension for 4 N) now holds a 2 N load. How long is the whole spring now, in cm?

18 A graph of extension against force is a straight line, then starts to curve. Past what point will the spring no longer go back to its original length? Answer in two words.

19 A skydiver falls at a steady speed. Her weight is 700 N. How big is the air resistance on her, in newtons?

20 Explain why a skydiver slows down when her parachute opens.

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