bananalearn

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Force and pressure for Grade 8

Practice worksheet - Science · Grade 8 · Predict, model, explain

Name: _____ Date: _____

Show your working. Answers are not included in this copy.

Show the quantity you are finding, the formula or force combination, the units and a reason. The questions supply force values directly. Use the diagrams for reasoning; no physical experiment is required.

1. A book rests on a table. Does this prove that no forces act on it?

2. Two pushes of 7 N and 2 N act left along the same line. Find their combined force.

3. A horizontal 12 N pull right is opposed by 5 N friction left. Find the net horizontal force.

4. A trolley moves straight at constant speed. Can its net force be zero?

5. A force of 90 N acts perpendicularly over 0.03 m^2. Find the average pressure.

6. Keep the force fixed but make the contact area three times as large. What happens to pressure?

7. Convert 200 cm^2 to m^2.

8. A 30 N load acts over 100 cm^2. Find the average pressure in Pa.

9. Pad X: 50 N over 0.01 m^2. Pad Y: 100 N over 0.04 m^2. Which pressure is greater?

10. Two points are at the same depth in the same connected liquid at rest. One is near a wide side and the other near a narrow side. Under the same surface conditions, which has greater pressure?

11. A learner says: 'A magnet attracts all metals because magnetic force acts without contact.' What needs correcting?

12. Design a fair comparison of two model support pads using supplied force and area data. What should stay the same if you want to isolate the effect of area?