Year 9 Science: Net force, balanced and unbalanced forces, and pressure

Name: _____ Date: _____

Try these without your notes first, then check the answer key.

Practice

1. A boat's engine pushes forward with 800 N. Water drag is 650 N backward. Find the net force and say what the boat does.

2. A cyclist moves at a steady 20 km/h in a straight line. What is the net force on her, and how do you know?

3. In a test of how the mass of a trolley affects its speed down a ramp, name the independent, dependent and two controlled variables.

4. Trial times: 3.10 s, 3.06 s, 3.62 s, 3.08 s. Which is the outlier, and what is the mean of the others?

5. A 50 N box sits on a base of 0.25 m². What pressure does it exert?

Fix the mistake

6. Correct this statement: "A moving object needs a forward net force to keep going at a steady speed."

7. Correct this statement: "450 N to the left and 400 N to the right give a net force of 850 N."

8. Correct this statement: "600 N on 400 cm² gives a pressure of 600 ÷ 400 = 1.5 Pa."

9. Correct this statement: "One careful run is enough, and an odd result can just be deleted."