Forces and motion

Science • Grade 9 • Student worksheet

Name: _____ Date: _____

1. A runner travels 120 m in 15 s. Calculate average speed.

2. A cyclist increases speed from 4 m/s to 16 m/s in 6 s. Calculate acceleration.

3. A net force of 48 N acts on an 8 kg object. Calculate acceleration.

4. A 15 kg box is pushed with 90 N against 30 N friction. Find acceleration.

5. Explain why a passenger moves forward when a moving bus stops suddenly.

6. What is the net force on an object travelling at constant velocity?

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1. 8 m/s

2. 2 m/s²

3. 6 m/s²

4. 4 m/s²

5. Inertia: the passenger tends to continue moving forward.

6. 0 N