Work

Energy 3.3.3 | Part 2, usually Year 8 | 20 quick questions

KS3 science quick questions

Answer online, marked instantly

Activate 2: Energy; Activate 3: Energy

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

1 Mia pushes a shopping trolley along a supermarket aisle and it moves. In science, what is her force doing to the trolley? Answer in one word.

2 Finish the equation: work done = force × ...?

3 What is the unit of work done?

4 Pia uses a long lever to lift a heavy rock. She pushes down with a small force. Compared with the rock, does her end of the lever move a longer or a shorter distance?

5 To get work done in joules, which unit must the distance be in?

6 A removal worker slides a box 4 m across a floor using a force of 50 N. How much work does he do? Give your answer in J.

7 Putting wheels under a heavy cupboard makes it much easier to move. Which force do the wheels reduce?

8 Leo pushes hard against a brick wall for a whole minute. The wall does not move at all. How much work does he do on the wall, in joules?

9 You push with the same force but move an object twice as far. What happens to the work done? Answer in one word.

10 When a force does work, energy is ... from one store to another. Fill in the missing word.

11 Which simple machine is a rigid bar that turns about a point, like a crowbar or a pair of scissors?

12 What is the name of the point that a lever turns around?

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13 Levers, ramps and pulleys make a job easier. What do they reduce? Answer in one word.

14 Which simple machine uses a rope running over a wheel to help lift a heavy load, like a bucket up a well?

15 Stretching a spring does work on it. Which energy store of the spring fills up? Answer in one word.

Year 9 stretch

16 A crane lifts a crate weighing 2000 N up through 15 m. How much work does it do? Give your answer in kJ.

17 Ben does 600 J of work pushing a wheelbarrow with a steady force of 120 N. How far does the wheelbarrow move? Give your answer in m.

18 A lift does 9000 J of work raising a load up 6 m. What force does the lift apply? Give your answer in N.

19 Sam weighs 400 N and sits 1.5 m from the pivot of a seesaw. Lily weighs 300 N. How far from the pivot must she sit on the other side to balance it? Give your answer in m.

20 A ramp lets you push a heavy box up into a van with a smaller force. Explain why the ramp does not reduce the work you do.

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