Forces

Physics Paper 2 | 30 quick questions

GCSE science knowledge recall

Answer online, marked instantly

Name: _____ **Date:** _____ **Score:** _____ **/ 30**

1 What is the name for a quantity that has both size and direction? Answer in one word.

2 Is gravitational force a contact force or a non-contact force?

3 Complete the word equation: weight = mass × ...? Answer in two words.

4 What is the weight, in newtons, of a 50 kg pupil where g = 9.8 N/kg?

5 What is the name for the single point where the weight of an object can be thought to act? Answer in three words.

6 A box is pushed right with 30 N while friction acts left with 12 N. What is the size of the resultant force in newtons?

7 Complete the word equation: work done = force × ...?

8 How many joules of work are done when a 40 N force moves a crate 5 m in the direction of the force?

9 Complete the word equation: force = spring constant × ...?

10 What is the name for the point beyond which extension is no longer directly proportional to force? Answer in three words.

11 A spring has spring constant 25 N/m and is stretched by 0.4 m. What is the force in newtons?

12 Complete the word equation: moment of a force = force × ...? Answer in two words.

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13 What is the unit of a moment?

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14 A 20 N force acts 0.3 m from a pivot. What is its moment, in newton metres?

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15 Complete the word equation: pressure = force normal to a surface ÷ ...?

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16 As a diver goes deeper in the sea, does the water pressure on her increase, decrease or stay the same?

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17 What is the name for the upward force from a fluid on a submerged or floating object? Answer in one word.

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18 As you climb higher above sea level, does atmospheric pressure increase, decrease or stay the same?

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19 Roughly what is a typical walking speed, in metres per second?

20 What does the gradient of a distance-time graph give you? Answer in one word.

21 A car speeds up from 0 to 20 m/s in 4 s. What is its acceleration, in m/s^2?

22 What does the area under a velocity-time graph represent? Answer in one word.

Higher

23 Roughly what is the acceleration of an object falling freely near the Earth's surface, in m/s^2?

24 What is the name for the steady top speed reached when the resistive force on a falling object equals its weight? Answer in two words.

25 Complete the word equation for Newton's second law: resultant force = mass × ...?

26 What is the name for the tendency of an object to stay at rest or keep moving at constant velocity? Answer in one word.

Higher

27 Stopping distance = thinking distance + ...? Answer in two words.

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28 Explain in one sentence why braking hard from high speed can make the brakes overheat.

29 What is the momentum, in kg m/s, of a 60 kg runner moving at 5 m/s?

Higher

30 Explain in one sentence how a crumple zone reduces the force on passengers in a crash.

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