



Forces - quick fire questions

This worksheet is fully supported by a video tutorial; <https://youtu.be/jfjb1pnH8zw>

1. Define scalar quantity.
2. Define vector quantity.
3. Give an example of a contact force.
4. Give an example of a non-contact force.
5. How do you calculate resultant force?
6. What is the difference between mass and weight?
7. What is the equation linking weight, mass and gravity?
8. What are the units for weight?
9. What are the units for mass?
10. What are the units for gravity?
11. What is equation linking work, force and distance?
12. What are the units for work?
13. What are the units for force?
14. What are the units for distance?
15. How do you convert between Joules and Newton-metres?
16. What happens to an elastic object up to the limit of proportionality?
17. What happens to an elastic object after the limit of proportionality?
18. What is equation linking force, the spring constant and extension?
19. What are the units for force?
20. What the units for the spring constant?
21. What are the units for extension?
22. What is the equation linking elastic potential energy, the spring constant and extension?
23. What are the units for elastic potential energy?
24. What are the units for the spring constant?
25. What are the units for extension?
26. What is a fluid?
27. Can a fluid be compressed?
28. What is equation linking pressure, force and area?
29. What are the units for pressure?
30. What are the units for force?
31. What are the units for area?
32. Is distance a scalar or vector quantity?
33. Is displacement a scalar or vector quantity?
34. Is speed a scalar or vector quantity?
35. Is velocity a scalar or vector quantity?
36. What is the equation linking distance, velocity and time?
37. What are the units for distance?



38. What are the units for velocity?
39. What are the units for time?
40. How do you calculate the speed of an object from a distance-time graph?
41. When can an object have constant speed but still be accelerating?
42. How do you calculate the distance travelled from a velocity-time graph?
43. What is acceleration?
44. How do you calculate acceleration from a velocity-time graph?
45. What is the equation linking acceleration, change of in velocity and time?
46. What are the units for acceleration?
47. What are the units for change in velocity?
48. What are the units of time?
49. What is the equation linking final velocity, initial velocity, acceleration and time?
50. If an object is falling due to gravity what acceleration does it have?
51. Define terminal velocity.
52. How is an object moving if the resultant force is zero?
53. What is Newton's first law.
54. Define inertia.
55. What is the equation linking force, mass and acceleration?
56. What are the units for force?
57. What are the units for mass?
58. What are the units for acceleration?
59. What is stopping distance?
60. Give two factors that can affect reaction time.
61. Give two factors that can affect braking distance.

Higher tier only

62. What factors can cause an object to float or sink?
63. What is equation linking pressure, height, density and gravitational field strength?
64. What are the units for pressure?
65. What are the units for height?
66. What are the units for density?
67. What are the units and value for gravitational field strength?
68. What is the law of conservation of the momentum?
69. What is equation linking the momentum, mass and velocity?
70. What are the units for momentum?
71. What are the units for mass?
72. What are the units for velocity?



Physics Only

73. What is equation linking moment, force and distance?
74. What are the units for moment?
75. What are the units for force?
76. What are the units for distance?
77. What happens to an object if the clockwise and anticlockwise forces are balanced?
78. What happens to an object if the clockwise anticlockwise forces are unbalanced?
79. What is the equation linking force, change in velocity and change the time?