

- 4.3 A dog weighs 47.0 pounds on Earth. (a) What is its weight in newtons? (One newton equals 0.225 pounds.) (b) What is its mass in kilograms?

(a)  N

(b)  kg

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- 4.4 A dog on Earth weighs 136 N. The same dog weighs 154 N on Neptune. What is the acceleration due to gravity on Neptune?

$\text{m/s}^2$

## Section 5 - Newton's second law

- 5.1 When empty, a particular helicopter of mass 3770 kg can accelerate straight upward at a maximum acceleration of  $1.34 \text{ m/s}^2$ . A careless crewman overloads the helicopter so that it is just unable to lift off. What is the mass of the cargo?

kg

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