

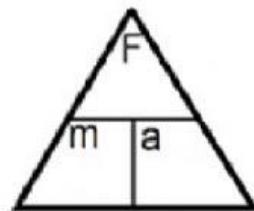
## Force Calculations

If your answer is not a whole number, use 2 decimals. No commas in your answers.

1. A 40-kg baseball is accelerated 600 m/s<sup>2</sup> by what force?

Answer Units

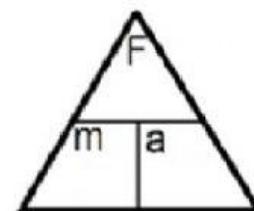
kg m/s<sup>2</sup> N



2. The acceleration of gravity is 9.8 m/s<sup>2</sup> on the earth, an object has a mass of 700kg what is its weight (remember weight is equal to the force of gravity).

Answer Units

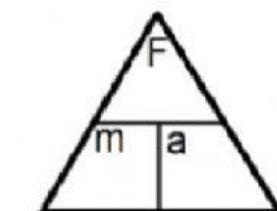
kg m/s<sup>2</sup> N



3. The weight of an object on a distant planet is 600N, and it mass is 294.56kg what is the acceleration of gravity on that planet.

Answer Units

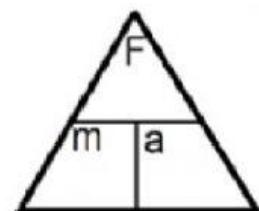
kg m/s<sup>2</sup> N



4. A weightlifter raises a 500kg barbell with an acceleration of 3 m/s<sup>2</sup>. How much force does the weightlifter use to raise the barbell?

Answer Units

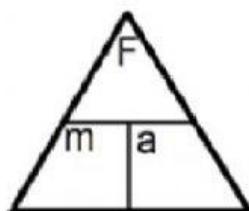
kg m/s<sup>2</sup> N



5. If a 50kg-water rocket takes off with a force of 250N, what is its acceleration?

Answer Units

kg m/s<sup>2</sup> N



6. A dancer lifts his partner above his head with an acceleration of 3 m/s<sup>2</sup>. The dancer exerts a force of 175N. What is the mass of his partner?

Answer Units

kg m/s<sup>2</sup> N

