

$$\Sigma F = ma \quad F_g = mg$$

1) Fill in the missing blanks.

Mass	Earth Weight
12 kg	
	50 N
	0.45 N
100 kg	

2) a) What is the weight of a 15 kg bowling ball on Earth? b) What will it weigh on the Moon where gravity is 1/6 of Earth's? c) What will be the bowling ball's mass on the Moon?



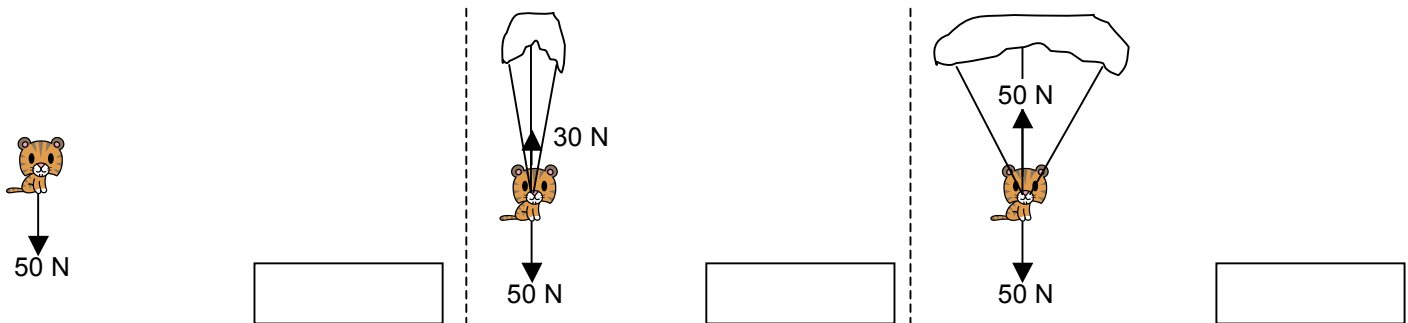

3) The weight of a cod (the official fish of physics) on the Moon is 35 N. a) What is this cod's weight on Earth? b) What is this cod's mass on Earth? c) What is this cod's mass on the Moon?




4) What net force was required to accelerate a 1500 kg car at a rate of 5 m/s<sup>2</sup>?

5) What is the mass of a turkey if you apply a net force of 5 N and it accelerates at 2 m/s<sup>2</sup>?

6) Given the 5 kg pet below, a) write down the net force acting on it and b) calculate the acceleration. Remember to include DIRECTIONS for both your answers.






7) a) What has more inertia, 1 kg of steel or 1 kg of yogurt? b) Which has more mass? c) Which would weigh more on the Moon? d) Which weighs more on Earth?





8) Calculate the missing variables in the pictures below. Remember:  $\Sigma F = \text{sum of all the forces} = ma$

a) This object is accelerating to the right at 3 m/s<sup>2</sup>.

b) This object is accelerating to the left at 0.5 m/s<sup>2</sup>

