

Name:

Period:

## $F = ma$ Worksheet

1. How much force is required to accelerate a 2kg mass at  $3 \text{ m/s}^2$ ?
2. What is the mass of an object that requires 100N of force in order to accelerate it at  $10 \text{ m/s}^2$ ?
3. What is the acceleration of a 10kg mass pushed by a 5N force?
4. Given a force of 88N and an acceleration of  $4 \text{ m/s}^2$ , what is the mass?
5. How much force is required to accelerate a 12kg mass at  $5 \text{ m/s}^2$ ?
6. Given a force of 10N and an acceleration of  $5 \text{ m/s}^2$ . What is the mass?
7. How much force is required to accelerate a 5kg mass at  $20 \text{ m/s}^2$ ?
8. What is the acceleration of a 5kg mass pushed by a 10N force?
9. Given a force of 56N and an acceleration of  $7 \text{ m/s}^2$ , what is the mass?
10. How much force is required to accelerate an 8kg mass at  $5 \text{ m/s}^2$ ?

11. What is the acceleration of a 24kg mass pushed by a 6N force?

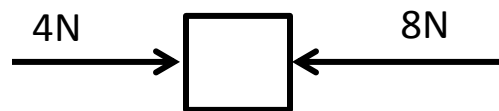
12. What is the acceleration of a 25kg mass pushed by a 10N force?

13. Given a force of 100N and an acceleration of  $5\text{m/s}^2$ . What is the mass?

14. How much force is required to accelerate a 50kg mass at  $2\text{m/s}^2$ ?

15. What is the acceleration of an 18kg mass pushed by a 9N force?

16. Find the acceleration of the 2kg block in the following diagram.



17. Find the acceleration of the 1kg block in the following diagram.

