Name: Key

Period:

1. F = 6N	125 kilograms ✓
2. m = 125 kg	23 kgm/s ✓
3. a = 3 m/s²	3 m/s² ✓
4. v = 29 m/s	29 meters/sec ✓
5. D = 228 m	228 meters ✓
6. p = 23 kgm/s	6 newtons ✓

1. E Inertia	A. An action that can causes motion.
2. C Mass	B. Force pulling all object toward each other.
3. B Gravity	C. The amount of matter in an object
4. D Net force	D. Total of all of the forces on an object.
5. A Force	E. Ability of an object to resist change of motion.

Number these from least (1) to most (5) inertia.

A baseball	A small car	A truck	A feather	A large train
2	3	4	1	5

Number these from least (1) to most (5) momentum.

Fast car	Parked truck	Slow car	Fast baseball	Fast feather
5	1	4	3	2

Which of Newton's Three Laws Applies?
Law 1, 2, or 3?

3 When you put a book on a table the table pushes on the book.

1 A person is pushed forward into their seatbelt when a car stops.

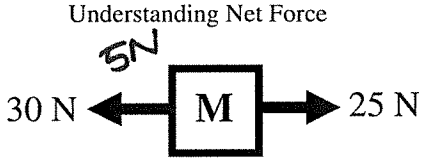
2 A larger car takes more force to move.

3 A person leans on a wall and the wall pushes back.

1 A brick sits on a table until you push on it.

Understanding Net Force

Which way will it accelerate?



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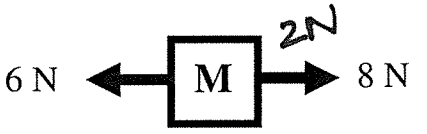


→

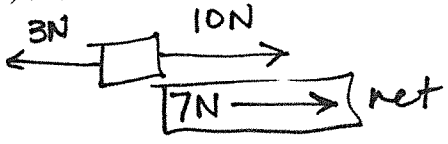
0N
no direction

A sled is being pulled to the left by 5 dogs, each dog pulling with 6 Newtons of force. Find the net force.

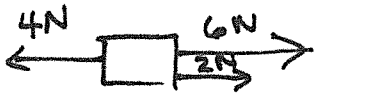
$5 \times 6N = 30N$

net
30 N 6 ft

If a person pulls on a cart to the right with a force of 10 N and a second person pulls to the left with a force of 3 N, what is the net force (+ direction) on the cart?



A 2 N and 6 N force pull on an object to the right and a 4 N force pulls to the left a 0.5 kg object. What is the net force on the object?



4N → net

A 20 kg bike accelerates at 10 m/s². With what force was the person pedaling?

$F = ma$
$= (20kg)(10\ m/s^2)$
$= 200N$

If a person is pushing a cart with a force of 40 Newtons and it accelerates at 0.5 m/s², what is the mass of the cart?

$F = ma$
$(40N) = m(.5\ m/s^2)$
$m = 80kg$

What is the acceleration of a 3 kg rock that is thrown with a force of 18 N?

$F = ma$
$(18N) = (3kg)a$
$6\ m/s^2 = a$