Name: Key

Period:

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

125 kilograms	
23 kgm/s	
3 m/s²	
29 meters/sec	
228 meters	
6 newtons	

List, in your own words, the three laws of motion:

1) If something is resting it will stay at rest until something moves it

2) $F = m \times a$

3) For every action there is an equal and opposite reaction

1.	Inertia	E
2.	Mass	C
3.	Gravity	B
4.	Net force	D
5.	Force	A

A. An action that can causes motion.

B. Force pulling all object toward each other.

C. The amount of matter in an object

D. Total of all of the forces on an object.

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	3	4	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.

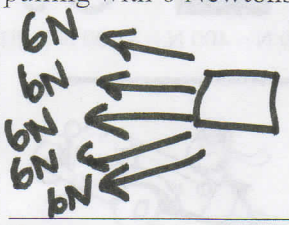
3 A person is pushed forward into their seatbelt when a car stops.

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.

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

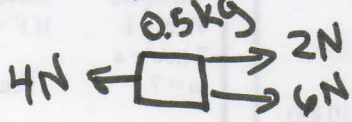


Net
$-6N-6N-6N-6N-6N$
$= 5(-6N)$
$= \boxed{-30N}$

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?

$10N - 3N = \boxed{7N}$ right

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



$6+2-4 = \boxed{4N}$ right

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

$N = \frac{kg \cdot m}{s^2}$

$F = m \times a$
$= 20 \times 10$
$= \boxed{200\ N}$

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?

$\frac{F}{a} = \frac{m \cdot a}{a}$

$m = \frac{F}{a} = \frac{40}{0.5} = \boxed{80kg}$

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

$F = m \cdot a$

$a = \frac{F}{m} = \frac{18}{3} = \boxed{6\ \frac{m}{s^2}}$