

Name

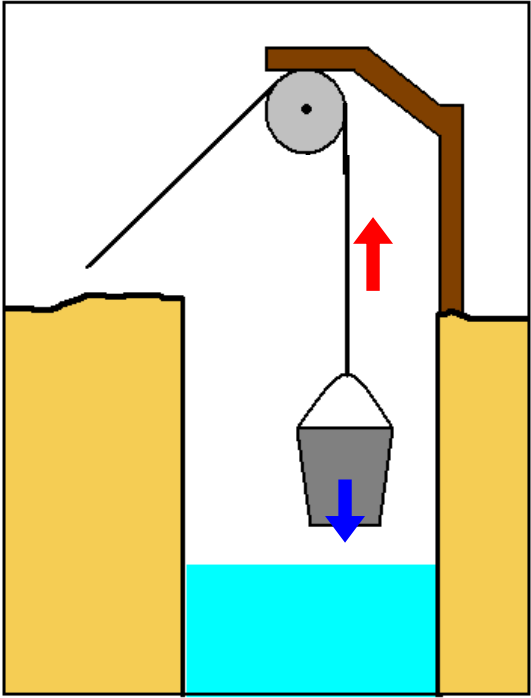
What forces are acting on the bucket?  
 Circle the correct answers below for each of the two arrows:

**↑**    Mass    Tension    Friction    Weight



**↓**    Mass    Tension    Friction    Weight

In a real well, the bucket is easier to pull up while it is still in the water than when it is out of the water. This is due to a separate force. Can you identify it from the choices below?

Friction    Upthrust    Drag    Acceleration



Look at the steering runners of the snowmobile and the skis.

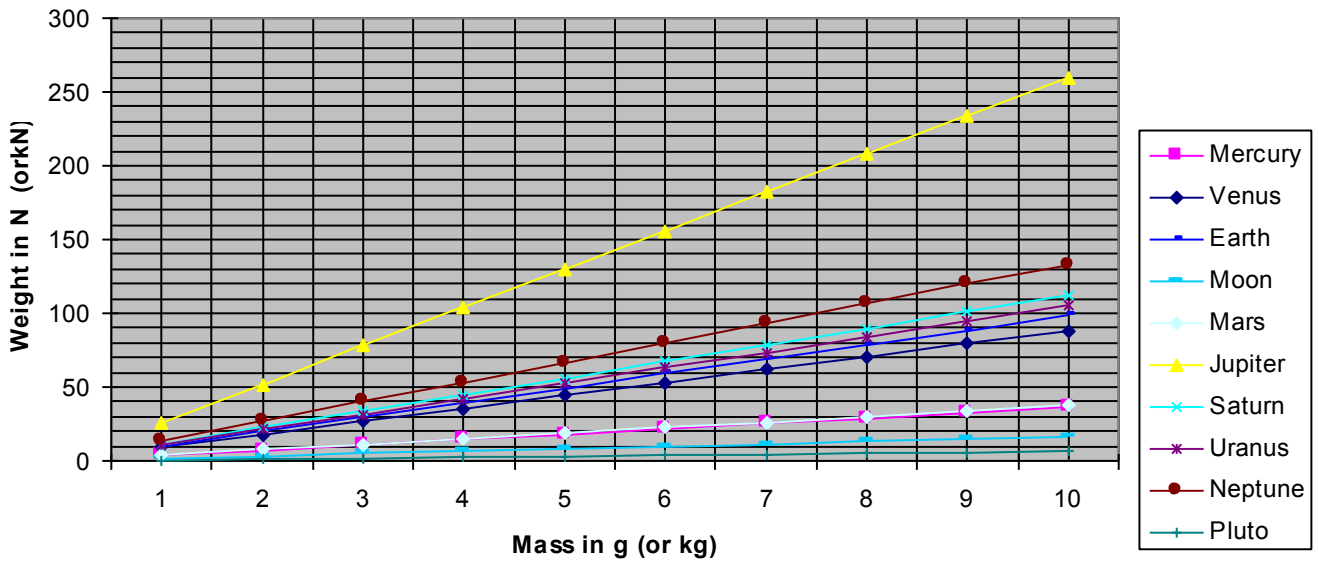
Why do skis and runners have to be **SMOOTH**?

What can you do to help them slip over the snow?

Why are skis and runners **LONG** and **THIN**?

# Forces and their Effects QCA7K 3C

Solar System mass/weight conversion



Mass is the amount of something. It doesn't change when you go into space  
 Weight is the force exerted on it by gravity. It changes depending on where you are.



Pick an object from the food display.   
 What is its marked "weight"?

What is its weight (on Earth) in Newtons?

Now use the chart to see what bit would weigh in other parts of the Solar System.

where	weight

Y	N	O	I	T	C	I	R	F	D
A	S	A	S	M	F	O	R	S	E
T	S	U	R	H	T	P	U	A	R
T	A	T	O	R	S	I	O	N	G
I	M	T	E	N	S	O	I	N	R
O	E	E	C	N	G	A	R	D	A
N	C	N	R	S	S	A	L	R	V
E	R	C	O	F	O	I	G	A	I
F	O	C	E	R	F	T	O	V	T
G	F	R	G	T	I	Y	V	N	Y

Can you find the different forces in the grid?  
 Answers must be in straight line.

- Force
- Torsion
- Friction
- Upthrust
- Gravity
- Drag
- Mass
- Lift
- Tension