VRIJEASO.SCHOOL

See you inspace

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SCHOOL/ CLASS: De Bron/ 3WETc	MARKS: /...

EXPERIMENT:magnetona balance

RESEARCH QUESTION

Canyouinfluencetheweightofamagnetwith another magnet?
Whohasthestrongestmagnet,DeBronor CSI?

HYPOTHESIS (indicate thecorrectanswer)

Theweigthofamagnet***doeschange***/*doesn'tchange*.ifyoucomenearwith anothermagnet.
Thechangeinweightis***dependent***/*independent*fromthewayyouholdthe othermagnet.

MATERIAL

Kitchenbalance
Twomagnets
Ruler.

OPERATION OFTHEEXPERIMENT

Putone magnetonthekitchenbalancetoweigh.
Approachwith another magnetandlook howtheweightchanges.
Repeatthis whileholdingthemagnetintheother direction.

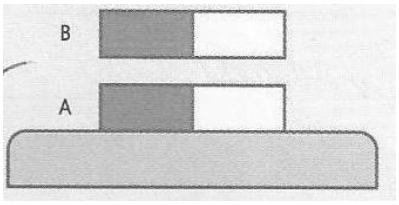
THERESULTS:

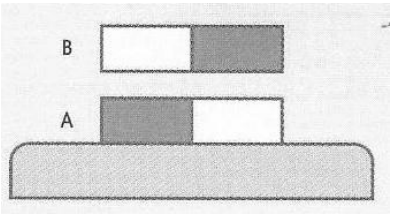
doingtheexperiment
Readthemassofthe magnet andcalculate theweight.

Come nearwith the other magnet until you see an other "mass" on the balance.Fromthenon,comecloser cm bycm.

Notethe"mass"bycmandcalculatetheweight.Makesureyoumeasureto themillimeter!

Change themagneticpolesandrepeat.





Completethe tables

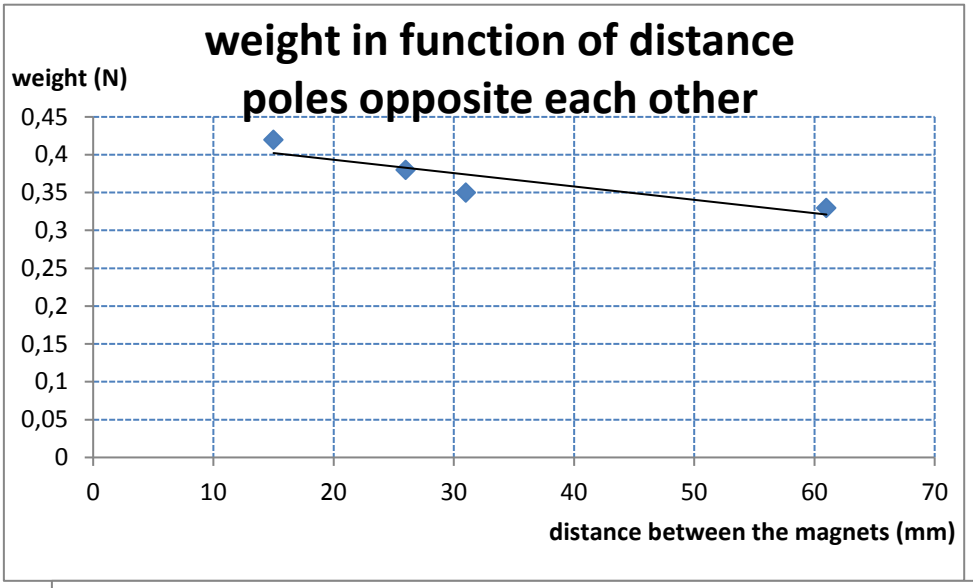
SITUATION 1:thereis*attraction /repulsion*bythemagnets

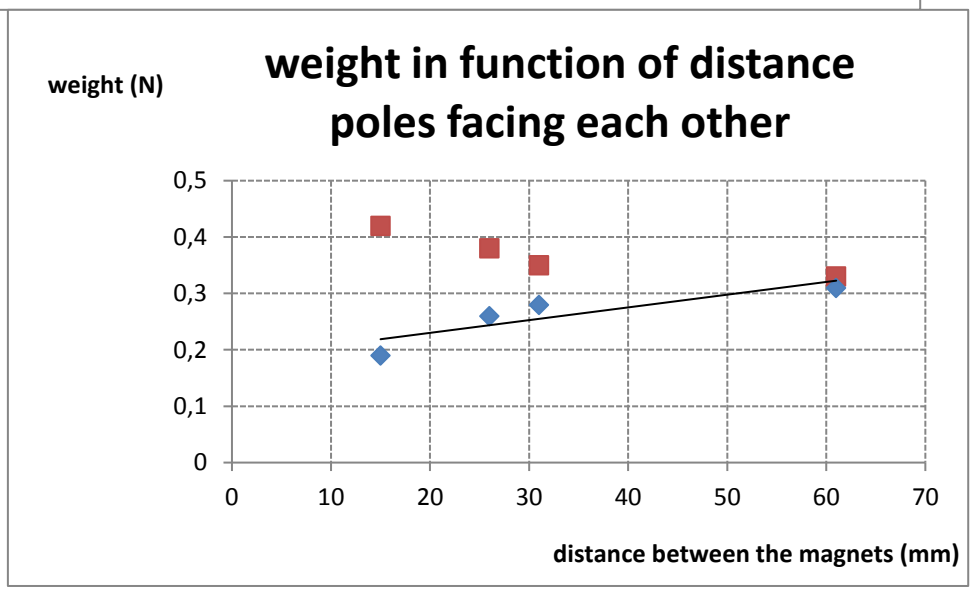
Distancebetween magnets(mm)	"mass" (g)	weight(N)
61	34	0.33
31	36	0.35
26	39	0.38
15	43	0.42

SITUATION 2:thereis*attraction /repulsion*bythemagnets

Distancebetween magnets(mm)	"mass" (g)	weight(N)
61	32	0.31
31	29	0.28
26	27	0.26
15	20	0.19

Makegraphs(excel)oftheweight(F_g)infunctionofthedistancebetweenthe magnets.Maketwo differentgraphs,oneforeachsituation.Copythegraphinthis document.





CONCLUSIONS

If themagnetsattracteachother,theweight ofthemagnetbelow will

1) Be lower
   If themagnetsrepulseeachother, theweightofthemagnetbelow will
2) Be higher

REFLECTION

Howdoyou explain theconclusions?

1) The weight of the magnet below is lower because the magnet above attract the magnet to himself, so the weight is lower because now the magnet pushes less on the balance.
2) The magnet above push the magnet below on the balance, so the weight is higher.

Is the change in weight the same either by attraction or repulsion?

Yes, it's about the same. (attraction: lower weight, repulsion: higher weight)

Compare your resultswith theresults in the other school.Which school has

the strongest magnets?

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