

How Many? How Far? How Thick? Observation Sheet

Part I: How Many?

1. Make a hook with one of the paper clips and hang it from one of the magnets.
Predict how many paper clips you think the magnet will hold before the clip falls off. Record this prediction on the table below.
2. Carefully place paper clips on the hook until the hook falls from the magnet. Record your data on the table below.
3. Repeat this three times making sure to record your data each time.
4. Repeat with two magnets, and then three. Make your predictions first, and then test the magnets three times and record your data in the table. You will average the numbers at the end of the experience.

How many clips will the magnet hold?

Predict the number of paper clips that the magnet(s) will hold.	1 magnet	2 magnets	3 magnets
First trial			
Second trial			
Third trial			
Average number			

5. You are now ready to explore the magnetic forces of other kinds of magnets by repeating the experiment above. Record your observations here:

6. Based on your observations, what conclusions can you make about the force exerted by the different magnet combinations? Did adding magnets make a significant difference in the number of paper clips the magnet could hold? Did the number of clips vary between one kind of magnet and another kind?

Part II: How Far?

1. On a piece of paper, draw a line that is 20 centimeters long. Mark it at each centimeter. Place a paper clip at the other end of the line. Predict the distance at which the paper clip will be attracted to the magnet. Record this prediction on the table below.
2. Slowly, slide the magnet along the line you have drawn towards the paper clip. Stop moving the magnet when the paper clip attaches itself to the magnet. Record the distance in centimeters on the table below.
3. Repeat this three times making sure to record your data each time.
4. Repeat with two magnets, and then three. Make your predictions first, and then test the magnets three times and record your data in the table. You will average the numbers at the end of the experience.

How far will the clip move?

Predict the distance that a paper clip moves.	1 magnet	2 magnets	3 magnets
	First trial		
Second trial			
Third trial			
Average number			

5. You are now ready to explore the magnetic forces of other kinds of magnets by repeating the experiment above. Record your observations here:

6. Based on your observations, what conclusions can you make about the magnetic force of different magnet combinations. Did adding magnets make a significant difference in the distance a paper clip would move? Did the distance vary between one kind of magnet and another kind?

