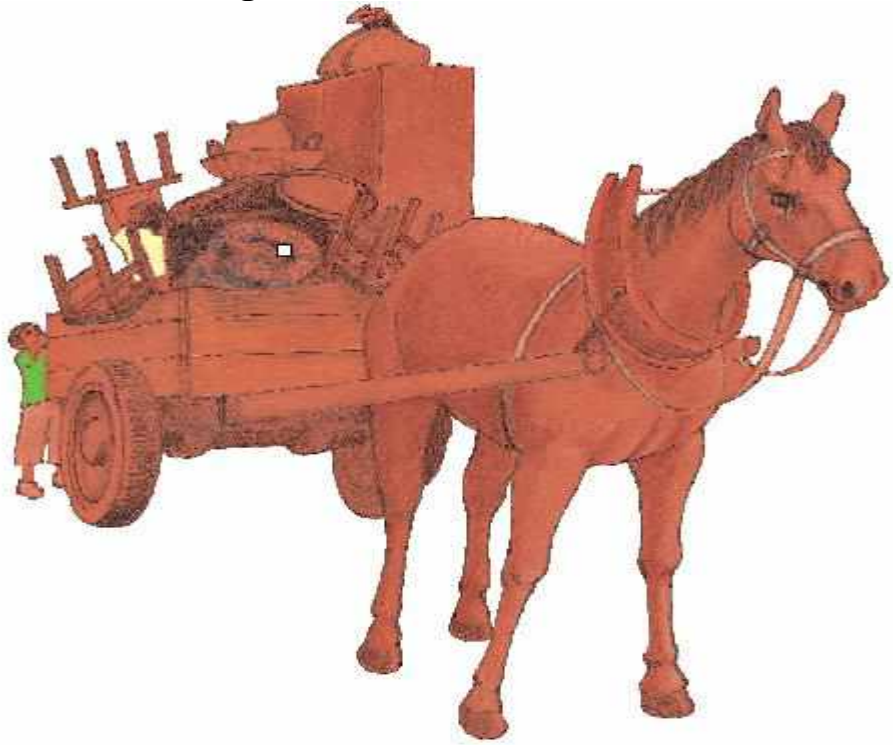
**NCERT book Page No: 134**



**Jaiju and Mannu were shifting house. They loaded all their things on a horse-cart. There were many things like – a water tank, five sacks of wheat, three tables, an almirah, four chairs, two mattresses, three sacks of rice, a bamboo ladder, pots and pans.**

**Father gave them some idea of the weight of each thing.**

| *Thing loaded* | *Weight* |
|---|---|
| A sack of wheat | 100 kg |
| A sack of rice | 35 kg |
| Water tank | 50 kg |
| Almirah | 70 kg |
| A table | 10 kg |
| A chair | 5 kg |
| A mattress | 20 kg |
| Bamboo ladder | 10 kg |
| Pots and pans | 10 kg |

**Question: 1**

**Find out the total weight they had loaded on the cart.**

**Answer:** Weights of all the things –

| Things Loaded | Weight | Number of items | Their total weights |
|---|---|---|---|
| A sack of wheat | 100 kg | 5 | 5 × 100 = 500 kg |
| A sack of rice | 35 kg | 3 | 3 × 35 = 105 kg |
| Water tank | 50 kg | 1 | 1 × 50 = 50 kg |
| Almirah | 70 kg | 1 | 1 × 70 = 70 kg |
| A table | 10 kg | 3 | 3 × 10 = 30 kg |
| A chair | 5 kg | 4 | 4 × 5 = 20 kg |
| A mattress | 20 kg | 2 | 2 × 20 = 40 kg |
| Bamboo ladder | 10 kg | 1 | 1 × 10 = 10 kg |
| Pots and pans | 10 kg | | 10 kg |

Total weight of all the things loaded = 500 + 105 + 50 + 70 + 30 + 20 + 40 + 10 + 10
= 835 kg
Therefore, total weight they had loaded on the cart is 835 kg

**Question: 2**
**Which things should be removed so that the weight of the load is not more than 700 kgs?**
**Answer:** The weight that should be removed to make the weight equal to 700 kg
= 835 – 700
= 135 kg
From the table,
The weight of 3 sacks of rice = 105 kg
The weight of 3 tables = 30 kg
Total weight of both of these two things = 105 + 30
= 135 kg
Therefore, to make the weight equal to 700 kg, they should remove 3 sacks of rice and 3 tables.

**Question: 3**
**Now, you also make your own balance. Write down how you made it. Also draw a picture of your balance in the box below.**

**Answer:** Do it yourself

**NCERT book Page No: 135**
**Question: 4**

***Activity***

Mannu and Jaiju put a pencil and a geometry box in the two pans of the balance. Which pan will go down? Why? Draw a picture to show it.

**Answer:** We know that the geometry box is heavier than pencil. Hence, the pan that has geometry box will go down.

**What is heavier?**
**Question: 5**
**Make pairs of different things and use the balance to decide which is heavier. First guess which thing will take the pan down and then check with your balance.**
**Answer:** Following are the pairs of different things
(a) Pen and book:
Book is heavier than the pen. So the pan that has the book will go down
(b) Glass and spoon:
Glass is heavier than the spoon. Hence, the pan that has the glass will go down
(c) Toothbrush and toothpaste
Toothpaste is heavier than the toothbrush. Therefore, the pan that has the toothpaste will go down
(d) Socks and trouser:
Trouser is heavier than the socks. Hence, the pan that has the trouser will go down.

**What is the heaviest?**
**Question: 6**
**(a) Make groups of three things. For example – eraser, ball and paper. Use the balance to arrange them in order of weight – the lightest, the one with in-between weight, the heaviest. Complete the table with at least five examples.**

| Lightest | In-between weight | Heaviest |
|---|---|---|
| Paper | Eraser | Ball |
| | | |
| | | |
| | | |
| | | |

**Answer:**

| Lightest | In-between weight | Heaviest |
|---|---|---|
| Paper | Eraser | Ball |
| Orange | Coconut | Pumpkin |
| Pen | Notebook | Dictionary |
| Glass | Jug | Bucket |
| Handkerchief | Scarf | Shawl |

**(b) Can you find your own weight using this balance?**
**Answer:** No, we cannot find our own weight.

**NCERT book Page No: 136**
**Making Weights**
**Question: 7**
**Get a new cake of soap. The packet will have the weight written on it. You can use this soap to make your own different weights.**
**The soap weighs _____ grams (g)**
**Answer:** The soap weighs 100 grams

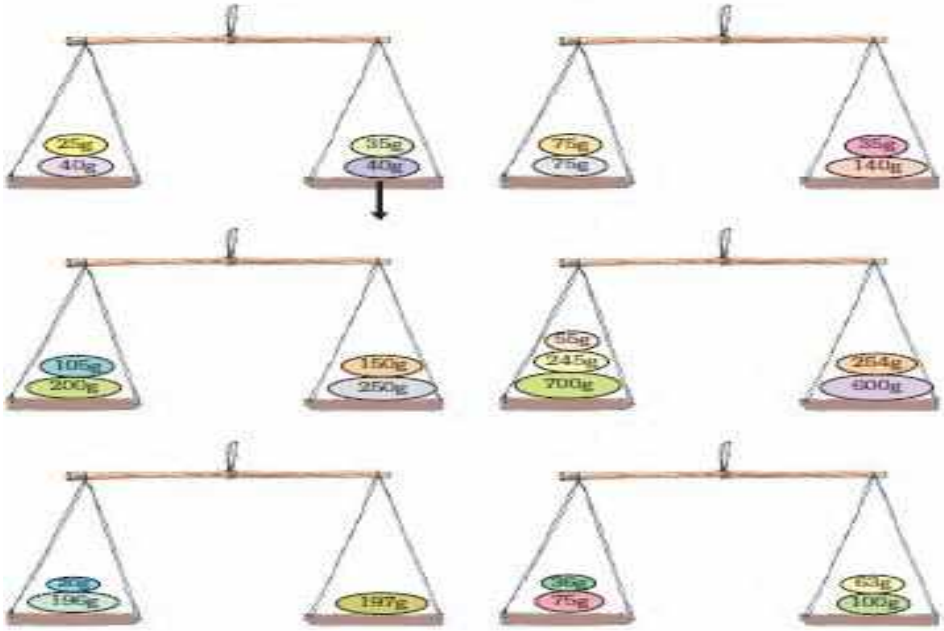
**Question: 8**
**Take a small plastic packet. Put it in one pan of the balance. Put the soap in the other pan. Slowly add sand to the packet till the pans are balanced.**
**Close the packet with a rubber band or string. Now stick a strip of paper, how many**

**grams will both these weigh?**

**Answer:** It is written 100 gm on the packet.

**Question: 9**
**If you put the soap and the weight you just made together in a pan, how many grams will both these weigh?**
**Answer:** Both weigh 100 + 100 = 200 gm

**NCERT book Page No: 137**
**Practice Time**
**Question: 10**
**(a) Which pan of the balance will go down? Show by drawing an arrow.**



**Answer:** Do it yourself

**(b) Is the weight on any of the pans equal to 1 kilogram? Mark it.**
**Answer:** The left pan of the fourth figure weighs 1000 gm. This pan includes the weights measure 55 g, 245 g and 700 g i.e.,
55 + 245 + 700 = 1000 g
= 1 kg
Therefore, the left pan of the fourth figure is equal to 1 kilogram

**(c) How many grams are there in 1 kg?**
**Answer:** We know
1 kg = 1000 g
Hence, there are 1000 grams in 1 kilogram.

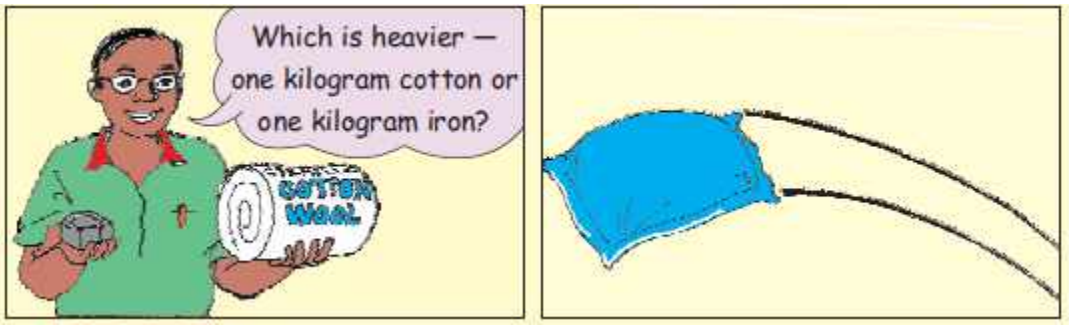
**NCERT book Page No: 138**
**Question: 11**
**Name 5 things that we usually buy –**

| In grams | In kilograms |
|---|---|
| 1. | 1. |
| 2. | 2. |
| 3. | 3. |
| 4. | 4. |
| 5. | 5. |

**Answer:**

| In grams | In kilograms |
|---|---|
| Turmeric powder | Tomatoes |
| Mustard seeds | Sugar |
| Chilli powder | Wheat |
| Cardamom | Bananas |
| Cloves | Rice |

**Question: 12**
**Which is Heavier?**




**Answer:** Both have equal weight.

**NCERT book Page No: 139**
**Dinesan Went Shopping**
**Dinesan went to a shop and bought some things.**
**His younger brother cut the end of the bill where the weights were written.**
**Question: 13**
**Guess and write the weight of each thing he bought – in g or kg.**

| *Items* | *Weight* | |
|---|---|---|
| Rice | 5 | |
| Sugar | 1 | |
| Mustard seeds | 10 | |
| Wheat | 3 | |
| *Dal* | 500 | |
| Tea | 250 | |
| Pepper | 25 | |

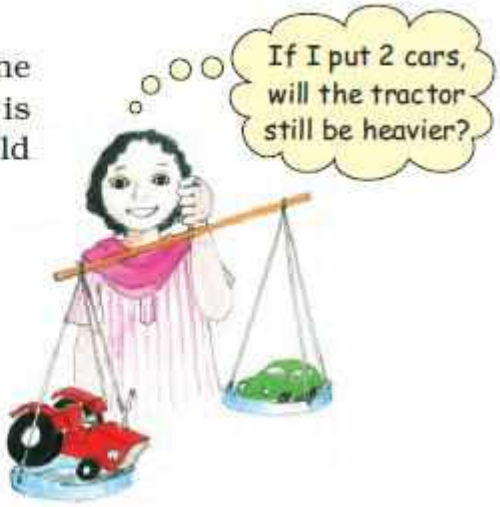
**Answer:** The weights of the given items are as follows

| Items | Weight |
|---|---|
| Rice | 5 kg |
| Sugar | 1 kg |
| Mustard seeds | 10 g |
| Wheat | 3 kg |
| Dal | 500 g |
| Tea | 250 g |
| Pepper | 25 g |

**Question: 14**
**(a)**

**Car and Tractor**

Ritu is weighing her toys. She wants to know if her tractor is heavier than her car. How would you help her to find out quickly?




**Answer:** This can be done by keeping the tractor and car in each of the pan of the balance separately. By this we come to know that the toy which goes down is the heavier toy among these two.

**(b) Guess which is the heaviest a real car, a bus or a tractor?**
**Answer:** A bus is the heaviest.

**(c) Which is the heaviest thing you have seen?**
**Answer:** The heaviest thing I have seen is a rail engine.

**NCERT book Page No: 140**
**Elephant's Weight**
**Question: 15**
**Now imagine what happened next and complete the story. Discuss with your friends how Vaidika's daughter found the weight of the elephant.**
**Answer:** First Vaidika's daughter marked how much the boat sank in the river. She then asked them to bring the elephant into the boat. Now, the boat sank deeper and she marked the new water level on the boat. She requested the king to put the gold on the boat till the water level touches the new raised water level mark when elephant was on the boat. Now, the king was left with no alternative and had to give the gold equal to the weight of the elephant to Vaidika.

**NCERT book Page No: 143**
**How Much the Chair Weighs**
**Question: 16**

**Anamika wants to weigh this chair using the weighing machine.**
**Can you suggest a way for doing this?**

**Answer:** First Anamika should put a flat wooden slab on the weighing machine, on which the chair can be kept easily and record its weight. Then she should place the chair on the slab kept on the weighing machine. The difference in the weight of the chair with the wooden slab and weight of the wooden slab will give the weight of the chair.

**NCERT book Page No: 143**

**Broken Stones**

Abdu sells firewood. There was a stone in his shop which weighed 13 kg. He used it to weigh firewood.

One day the stone fell down and broke into three pieces which weighed – 2 kg, 5 kg and 6 kg.


**Question: 17**

**Now you show how Abdu will use these stone pieces to weigh –**


**(a) 4 kg of firewood**

**Answer:** By keeping broken stone of 6 kg on the left pan and broken stone of 2 kg on the right pan with firewoods, he can weigh 4 kg of wood. Their difference i.e.,
6 – 2 = 4 kg will give the weight of firewood.

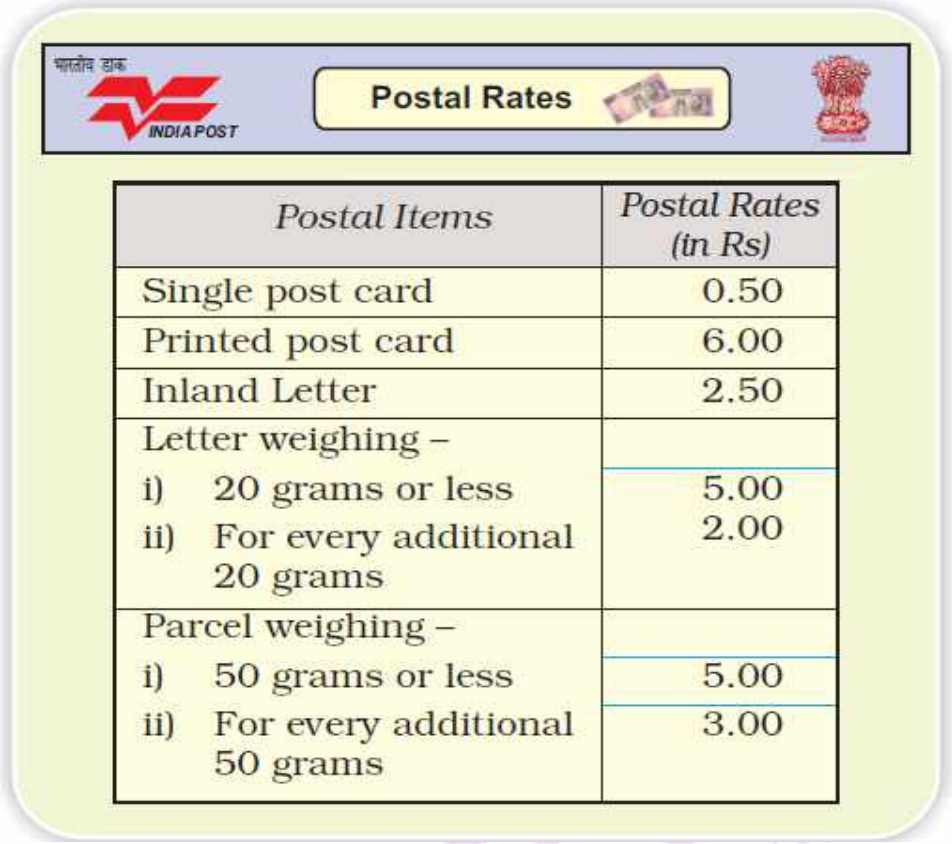
**(b) 3 kg of firewood**

**Answer:** He can weigh 3 kg of firewood by keeping the broken stone of 5 kg on the left pan and broken stone of 2 kg on the right pan with firewood. The difference of weight i.e., 5 – 2 = 3 kg which will balance the two pan of balance by firewood.

**(c) 7 kg of firewood**

**Answer:** He can weigh the 7 kg of firewood by keeping the broken stone of 5 kg and 2 kg on left pan and firewood on right pan.

**NCERT book Page No: 145**
**Post Office**




| *Postal Items* | *Postal Rates (in Rs)* |
|---|---|
| Single post card | 0.50 |
| Printed post card | 6.00 |
| Inland Letter | 2.50 |
| Letter weighing – | |
| i) 20 grams or less | 5.00 |
| ii) For every additional 20 grams | 2.00 |
| Parcel weighing – | |
| i) 50 grams or less | 5.00 |
| ii) For every additional 50 grams | 3.00 |

**Question: 18**
**Have you ever been to a post office?**
**Answer: Yes.**

**Question: 19**
**What different things do people go there for?**
**Answer:** People go to post office for following reasons.
(i) To post the letters
(ii) To send money orders
(iii) For banking
(iv) To purchase the post cards, inland, envelop or stamps etc.

**Question: 20**
**How much does a postcard cost?**
**Answer:** The cost of the post card is Rs 0.50

**Question: 21**
**How much does an inland letter cost?**
**Answer:** The cost of the inland letter is Rs 2.50

**Look at the postal rates given in the chart.**

**Question: 22**

**How much will you have to pay for stamps on a letter weighing 50 grams?**

**Answer:** The stamps are required upto 20 grams = Rs 5.00
For next 20 grams = Rs 2.00
For next 10 grams = Rs 2.00
Total cost of stamps = Rs 5.00 + Rs 2.00 + Rs 2.00
= Rs 9.00
Therefore, I have to pay Rs 9.00 for stamps on a letter weighing 50 grams.

**Question: 23**

**Akash wants to send a parcel of the Math Magic textbook to his friend Rani in Chennai. The book weighs 200 g. See the chart to find the cost of posting the book.**

**Answer:** Akash has to parcel the book to send it to Rani. Following are the costs, he has to pay for the parcel
The weight of book = 200 grams
The cost of parcel upto 50 grams = Rs 5.00
The cost of additional 150 grams = Rs 3.00 × 3
= Rs 9.00
Total cost = Rs 5.00 + Rs 9.00
= Rs 14

**Question: 24**

**Read the weight shown in the picture. Find out the cost of sending a parcel of that weight.**


**Answer:** The weight of parcel on the weighing machine = 225 gram
Postal charges for 50 grams = Rs 5.00
For additional 50 grams = Rs 3.00
For next 50 grams = Rs 3.00
For next 50 grams = Rs 3.00
For next 50 grams = Rs 3.00

Total postal charges = Rs 5.00 + Rs 3.00 + Rs 3.00 + Rs 3.00 + Rs 3.00 = Rs 17.00

**NCERT book Page No: 146**
**How Many Stamps?**

**Question: 25**
**Rahul needs stamps of Rupees 25 for his parcel. He went to the post office. Only stamps of Rs 1, Rs 2, Rs 5 and Rs 10 were there at that time. Using those stamps in how many different ways can he make Rs 25?**
**Answer:** By using available stamps, he can make Rs 25 in the following ways:
(a) Rs 1 × Rs 25 = Rs 25
(b) Rs 2 × Rs 12 + Rs 1 = Rs 24 + Rs 1
= Rs 25
(c) Rs 5 × Rs 5 = Rs 25
(d) Rs 10 × Rs 2 + Rs 5 = Rs 20 + Rs 5
= Rs 25
(e) Rs 10 + Rs 5 × Rs 3 = Rs 10 + Rs 15
= Rs 25

**Our Weight Together**

A frog was struggling to escape from the mouth of a crow. How can I escape? — the frog thought. Suddenly a trick came to his mind. He asked the crow — Are you good at arithmetic? If yes, then I will ask you a problem.

Your weight is 650 g and I am only 145 g. How much do we weigh together?

The crow was good at mathematics, so he happily opened his beak to answer.

**Question: 26**

**What happened after that? So what was the answer the crow wanted to give?**

**Answer:** As the crow opened the mouth to answer the frog's question, the frog escaped from his mouth. Crow gave the answer as – We weigh 795 gm together.

**NCERT book Page No: 147**

**Am I Fit or Fat?**

**The chart shows the height and weight of children between 6 and 10 years old.**

| *Name* | *Age* | *Height* | *Weight* |
|---|---|---|---|
| Temshula | 6 | 3 feet, 7 inches | 16 kg |
| Sreekunth | 10 | 4 feet, 3 inches | 23 kg |
| Rabiya | 6 | 3 feet, 10 inches | 17 kg |
| Vineet | 8 | 3 feet, 11 inches | 19.5 kg |
| Kavita | 9 | 3 feet, 10 inches | 20 kg |

**Question: 27**

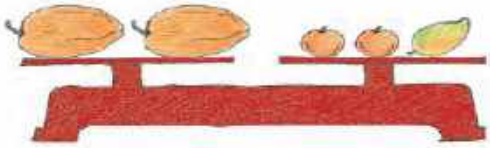
**Now, you also fill the table by finding out the age, height and weight of any five friends.**

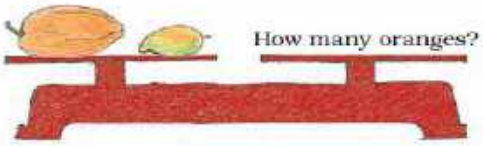
**Answer:** Some of my friend's name, age, height and weight are as follows:

| Name | Age | Height | Weight |
|---|---|---|---|
| Kavita | 7 | 4 feet 4 inches | 24 kg |
| Shreya | 6 | 4 feet 2 inches | 20 kg |
| Anjali | 10 | 5 feet 2 inches | 30 kg |
| Nikita | 9 | 5 feet 1 inches | 25 kg |
| Rashmi | 8 | 4 feet 9 inches | 22 kg |

**NCERT book Page No: 148**

**How Many Oranges?**






**Question: 28**

**All oranges have equal weight. The two papayas have the same weight. The weights in the first and second balances are equal.**

**How many oranges balance the weight in the third?**

**Answer:** In the first balance –

1 Mango + 1 Orange = 3 Oranges

1 Mango = 3 Oranges – 1 Orange

1 Mango = 2 Oranges

Hence, 1 Mango = 2 Oranges

In the second balance

2 Papaya = 2 Oranges + 1 Mango

2 Papaya = 2 Oranges + 2 Oranges [1 Mango = 2 Oranges]

2 Papaya = 4 Oranges

Hence, 1 Papaya = 2 Oranges

In the third balance

1 Papaya + 1 Mango = 2 Oranges + 2 Oranges [1 Papaya = 2 Oranges and 1 Mango = 2 Oranges]

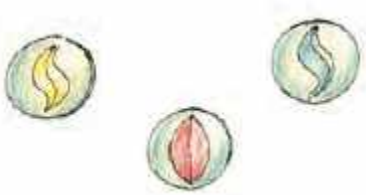
1 Papaya + 1 Mango = 4 Oranges

Therefore, in third balance, 4 Oranges will balance 1 Papaya and 1 Mango together.

**Find That Marble**

**Question: 29**

**There are 3 marbles of the same size but one marble is slightly heavier or lighter than the other two. Can you find which is that marble and if it is heavier or lighter? You can use a balance only two times.**



**Answer:** Let us take the three marbles as $M_1$, $M_2$ and $M_3$ in which one of them is heavier or lighter than the other two.
Put marbles $M_1$ and $M_2$ in different pans
First case: If both are equal, then $M_3$ is heavier or lighter than these marbles.
Second case: Put $M_1$ and $M_3$ in different pans
(a) If they are equal then $M_2$ is heavier or lighter.
(b) $M_1 < M_3$ then $M_2 = M_3$ and $M_1$ will be lighter than $M_1$ and $M_3$