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The Junk Seller



Have you ever met a *Kabariwali* – a woman who buys and sells junk? This is a true story told by Kiran, who has a junk shop in Patna.



I studied in a Hindi medium school in my village. My father wanted girls to study like boys. I loved Hindi and Science, but I hated Maths! Today Maths is most useful for my work. I could never imagine this in school.

What about you? Do you also find Maths difficult?

What is the most difficult thing in your Maths book? _____

What do you think is the easiest lesson? _____

When I was young, my father died in an accident. So my mother worked as a servant in some houses. We had a difficult time. I had to leave school after Class VIII. I wanted to study more but my mother got me married.

My husband's family lived in a mud house. His two brothers and his sister did not go to school. He had a tea stall.

Find out: how much for a cup of tea?

Ask people and find out the cost of a cup of tea

- ★ at a tea stall _____
- ★ at a hotel _____

If a person who runs a tea stall earns ₹ 30 in a day, how much will he earn in 10 days? _____

And in a month? _____

How did you get the answer? Discuss.



I thought of starting my own business. I thought I should open a bangle shop or a tailor shop. But my uncle said that we could earn a lot by opening a junk shop.

In 2001, my mother-in-law and I opened a junk shop. We took a loan of ₹ 8000 for the shop.

Find out: what is a loan?

- ★ Have you ever heard of someone taking a **loan**? For what? _____
- ★ How much loan was taken? _____
- ★ How much money was paid back? _____

Hariya and Babu want to buy a handcart for ₹ 300.



Hariya

I have taken a loan of ₹ 300 from a bank for six months. I will pay ₹ 51 every month to the bank.

But I have taken a loan of ₹ 300 from Chunnilal. After six months, I will pay back ₹ 360.



Babu

Who has to pay back more — Hariya or Babu? _____



People laughed and teased us about our work. They called it *ganda kaam* or 'dirty business'. But I did not think so. I knew this idea would work.

Now we have a *pucca* house with electricity. We have a fridge, a TV and a gas stove. My husband's brothers, sister and also my daughter go to school.



I have 9 rickshaws of my own. I give the rickshaws on rent, each for ₹ 20 a day. On Sundays I do not take any money for them.

How Much does Kiran Earn from 9 Rickshaws in a Day?

For 1 rickshaw she gets ₹ 20 per day.

So, for 9 rickshaws she will earn Rs _____.

How did you do it?

Hey! I will do it like this —
9 times 2 is 18.
So, 9 times 20 is 180.



But I find this easier.
For 10 rickshaws she will get
 $₹ 20 \times 10 = ₹ 200$.
So, for 9 rickshaws, she will
get $₹ 200 - \underline{\quad} = \underline{\quad}$.

Think of some other ways to do it.

Encourage children to use their own strategies to solve such problems. There should be discussion on how they arrived at their answers.

* In a week how much does Kiran earn from one rickshaw?

* **Do it mentally and write the answers.**

$2 \times 6 = \underline{\hspace{2cm}}$

$20 \times 6 = \underline{\hspace{2cm}}$

$2 \times 60 = \underline{\hspace{2cm}}$

$3 \times 42 = \underline{\hspace{2cm}}$

$4 \times 80 = \underline{\hspace{2cm}}$

$4 \times 81 = \underline{\hspace{2cm}}$

$9 \times 25 = \underline{\hspace{2cm}}$

$31 \times 9 = \underline{\hspace{2cm}}$



4 × 81 is 4 more than 4 × 80.
Am I right?



I have my own small junk shop. I buy junk from junk collectors. They go from house to house and bring junk on handcarts. I then sell it at the big shop.

How Much to Pay for this Junk?

Kiran has bought some junk from junk collectors.

Look at the next page the rate list to see today's rates. Help Kiran to find out the cost of the junk.

* How much will Kiran pay for 31 kg newspaper?

1 kg newspaper costs ₹ 5.
30 kg cost ₹ 5 × 30 = ₹ 150.
So for 31 kg she pays
₹ _____.



This exercise encourages children to use different strategies (other than the standard algorithm) for doing multiplication.

Rate-List

Kind of Junk	Price of 1 Kg
--------------	---------------

- | | |
|----------------------|---------|
| 1. Waste Paper | ₹ 4/- |
| 2. Newspaper | ₹ 5/- |
| 3. Iron | ₹ 12/- |
| 4. Brass | ₹ 170/- |
| 5. Plastic | ₹ 10/- |

* How much will Kiran pay for 42 kg newspaper?

* Also find the cost of:

- 22 kg of plastic
- 23 kg of waste paper
- 12 kg of iron

Can you do this without writing?



Guess the total money Kiran will pay to the junk collectors. Will it be

- More than 600?
- Less than 600?

Smart Kiran Sells the Junk

Kiran sells her junk to a big shop. She checks the prices on her mobile phone and sells only when she gets a good price.



Today she has gone to sell plastic, newspaper, iron and brass at Dinu's big shop.

Dinu weighs 32 kg iron, 4 kg brass, 152 kg newspaper, 63 kg plastic.



A. How much will Dinu pay for 63 kg plastic?

The rate of 1 kg plastic is ₹ 12.
So the cost of 63 kg plastic will be ₹ 12×63 .

Remember, you used boxes to multiply two numbers in Class III.

	60	3
10	60 × 10 600	3 × 10 30
2	60 × 2 120	3 × 2 6

Dinu's Rate-List	
Kind of Junk	Price of 1 Kg
1. Newspaper	₹ 6/-
2. Iron	₹ 14/-
3. Brass	₹ 180/-
4. Plastic	₹ 12/-
5. Waste Paper	₹ 4.50/-

12 × 63 means 12 times 63.
12 times 60 is 720. So, the answer is more than 720.
Also the answer is less than 800. Can you tell why?



Dinu added the numbers in the boxes:

$$\begin{array}{r}
 600 \\
 120 \\
 30 \\
 + 6 \\
 \hline
 756
 \end{array}$$

So, for 63 kg plastic, Dinu will give ₹ 756.

] Kiran bought 1 kg plastic for ₹ 10, but sold 1 kg plastic for ₹ 12. How much money does she earn on selling 1 kg plastic? ₹ _____

So, how much money does she earn for 63 kg? ₹ _____

B. Kiran sells 32 kg iron

- * How much money will Dinu pay for 32 kg iron?
- * Kiran buys 1 kg iron for ₹ 12, but sells it for ₹ 14.

How much does she earn when she sells 32 kg iron? ₹ _____

C. What will Dinu pay for 152 kg newspaper?

The rate of 1 kg newspaper is ₹ 6. So the cost of 152 kg newspaper is ₹ 6×152 .

Dinu writes:

	100	50	2
6	100×6	50×6	2×6
	600	300	12

$6 \times 100 = 600$. So, the answer is more than 600. Is the answer less than 1000? How did you guess?

Then he adds the numbers in the boxes:

$$\begin{array}{r} 600 \\ 300 \\ + 12 \\ \hline 912 \end{array}$$

I bought 1 kg newspaper for ₹ 5, but sold it for ₹ 6. How much money did I earn by selling 152 kg of newspaper? _____

So, for 152 kg newspaper he will give Kiran ₹ 912.

D. What does Dinu pay for brass?

How much money will Dinu pay for 4 kg brass? _____

Guess the answer first.

First guess the answer and then calculate:

- a) $37 \times 18 =$ e) $142 \times 5 =$
b) $45 \times 24 =$ f) $382 \times 3 =$
c) $69 \times 52 =$ g) $2 \times 175 =$
d) $77 \times 55 =$ h) $4 \times 206 =$

Fill My Diary

Kiran bought some junk from the junk collectors. She paid them ₹ 841. She sold the junk at Dinu's big shop and Dinu gave her these notes and coins.



Kiran wrote the record in her diary.

11 March 2007	
Money I paid — ₹ 841	
Money I got — ₹ 600	
— ₹ 150	
— ₹ 140	
— ₹ 60	
— ₹ 40	
— ₹ 4	
<u>Total ₹ 994</u>	
	₹ 994
	– ₹ 841
Money I earned :	<u>₹ 153</u>

Later she paid ₹ 919 to the junk collectors. When she sold the junk she got these notes and coins from Dinu.

28 coins of 

5 notes of 

1 note of 

18 notes of 

9 notes of 

Now you make a record in her diary.

Find out how much she earned this time.

18 March 2007