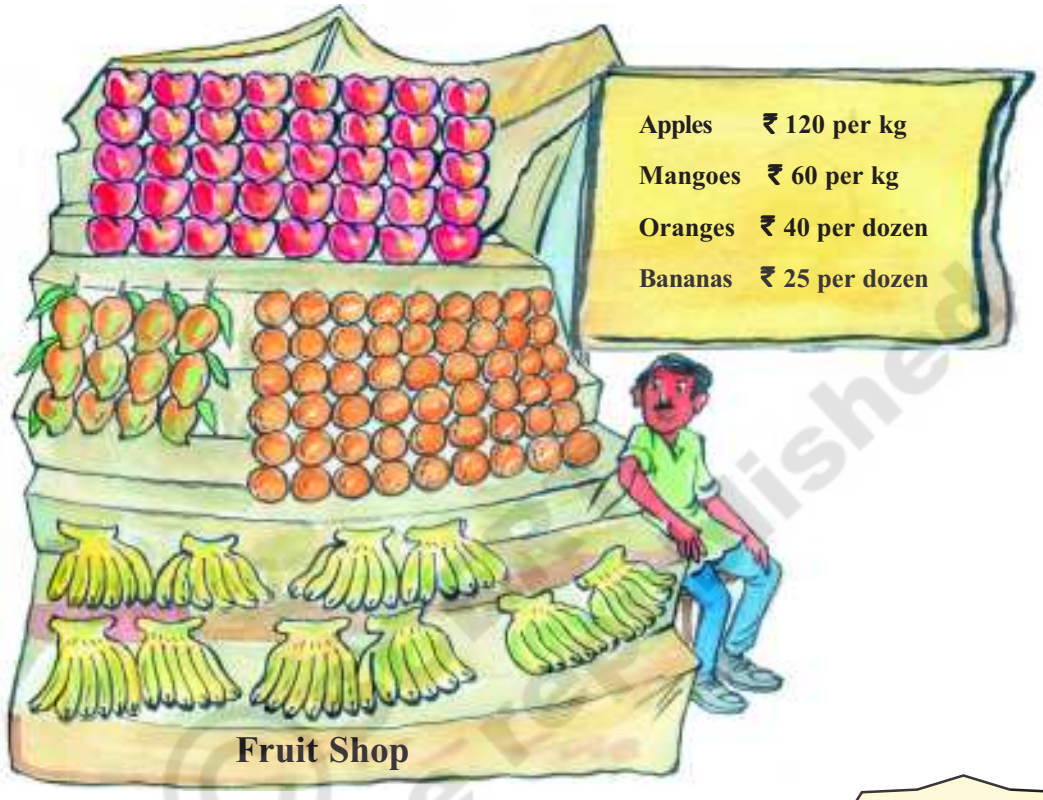
6 How many times?



Fruit Shop

1 dozen = 12

1. How many apples are there in the shop?

   There are ____ rows of apples.

   Each row has ____ apples.

   There are a total of _____ apples.

2. The price of apples is how many times the price of mangoes?

3. Raju came into the shop and bought 2 dozens of bananas. How much money does he need to pay to the fruit seller?

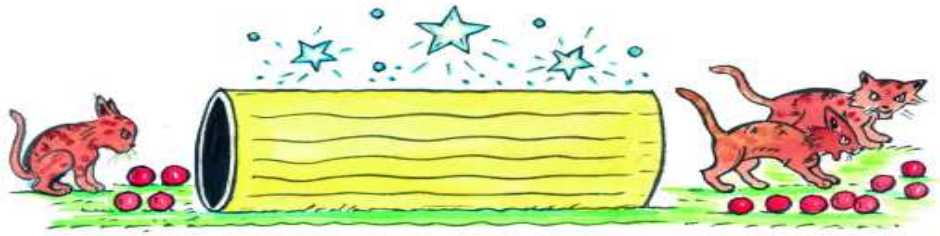
4. Karuna came and bought 3 kgs of mangoes and 1 kg of apples. How much money does she need to give to the shopkeeper?

Now, can you make more questions like those given above based on the picture.

Magic pipes in Laltekdi village

Once upon a time there were 4 magic pipes in Laltekdi village.

Whatever went into this pipe doubled itself.



When 1 cat walked into the pipe 2 cats came out.

When 4 balls were thrown into the pipe 8 came out.

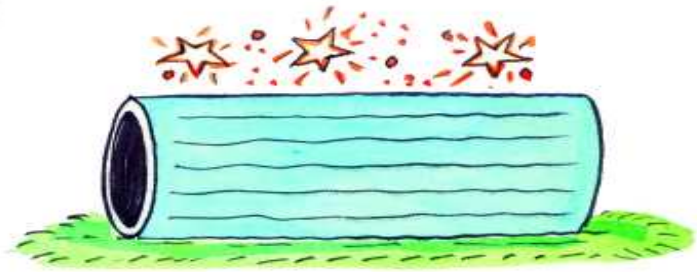
(a) If 6 birds walk into the pipe, how many will come out? _____

Whatever went into this pipe it became three times.

When 2 frogs jumped into the pipe 6 frogs came out.

(a) If 6 pigs walk into the pipe, how many will come out? _____

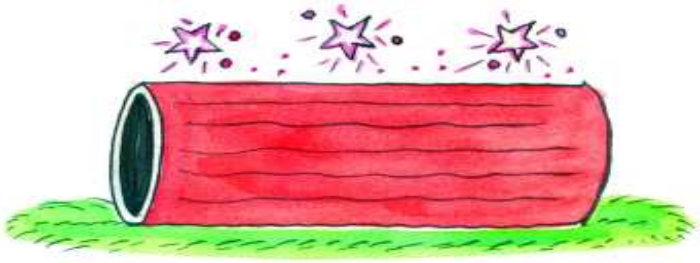
Whatever went into this pipe it became six times.



(a) If 7 birds walk into the pipe, how many will come out? _____

(b) If 8 dogs walk into the pipe, how many will come out? _____

Whatever went into this pipe it became 8 times.



(a) If 9 spiders walk into the pipe, how many will come out? _____

(b) If 8 ants crawl into the pipe, how many will come out? _____

Split numbers and multiply

Shravika and Vamshi were asking each other tables.

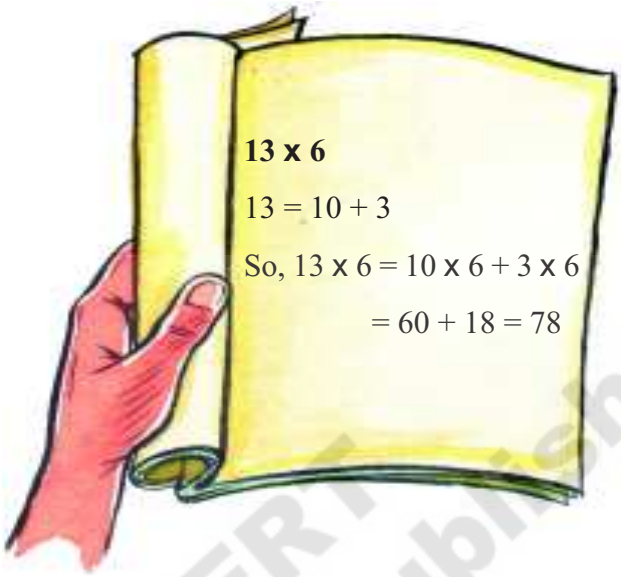
Vamshi : What is 8 times 7.

Shravika : 56

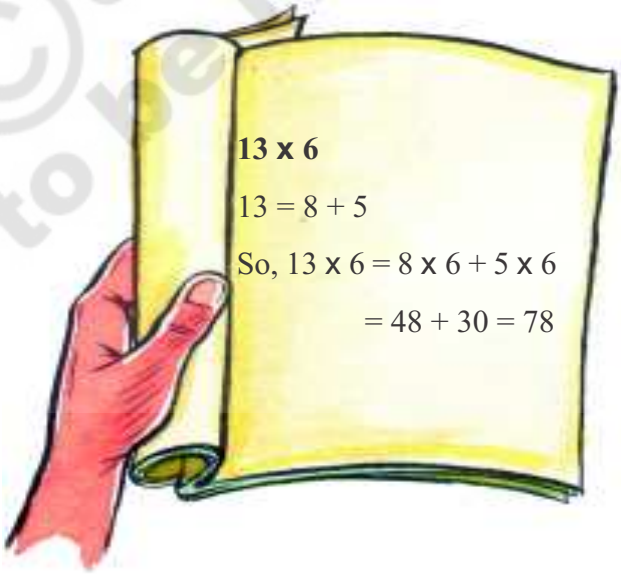
Shravika : What is 13 times 6.

Vamshi : I do not know. I only know tables till 10.

Shravika : You can answer this question even without knowing the 13 table. Just split up 13 into 10 and 3. Then multiply these numbers by 6 and add the products. Let me show this to you in your notebook.



Vamshi : You are right! I can split 13 into 5 and 8 also.



Shravika : Yes, splitting a number into smaller numbers and multiplying makes multiplication easier.

Do This

1. Split the numbers as you like and multiply. Also, see how your friends have solved the problems.

   (a) 18 x 9 (b) 17 x 6 (c) 19 x 8 (d) 26 x 7

2. In a plantation there are 12 rows of mango trees. If in each row there is 10 trees, how many mango trees are there in the plantation?

3. There are 18 rows in a bus. 5 passengers can sit in each row. How many passengers can sit in the bus? How many passengers can sit in 3 such buses?

4. Rani's age is 9 years. Her mother's age is thrice her age. What is Rani's mother's age?

5. If 4 children can sit on a bench in the classroom, then how many children can sit on 22 such benches?

6. One pen costs ₹ 8. How much 48 pens cost?

Packets and boxes of pencils

A packet contains 10 pencils.

(a) How many pencils do 2 packets have? 2 x 10 = 20

(b) How many pencils do 3 packets have? 3 x 10 = 30

(c) How many pencils do 4 packets have? 4 x 10 = 40

(d) How many pencils do 8 packets have? _____

(e) How many pencils do 10 packets have? _____

(f) How many pencils do 14 packets have? _____

(g) How many pencils do 26 packets have? _____

(h) How many pencils do 57 packets have? _____

Now if a box contains 10 such packets of pencils, how many pencils are there in the box? 10 x 10 = 100

(a) How many pencils do 2 such boxes have? 2 x 100 = 200

(b) How many pencils do 4 such boxes have? 4 x 100 = 400

(c) How many pencils do 6 such boxes have? _____

(d) How many pencils do 8 such boxes have? _____

(e) How many pencils do 10 such boxes have? _____

Observe the pattern and fill the blanks.

2 x 20 = 40	2 x 30 = 60	2 x 40 = 80
3 x 20 = 60	3 x 30 = 90	3 x 40 = 120
4 x 20 = 80	4 x 30 = 120	4 x 40 = 160
5 x 20 = 100	5 x 30 = 150	5 x 40 = 200
6 x 20 = _____	6 x 30 = _____	6 x 40 = _____
7 x 20 = _____	7 x 30 = _____	7 x 40 = _____
8 x 20 = _____	8 x 30 = _____	8 x 40 = _____
9 x 20 = _____	9 x 30 = _____	9 x 40 = _____
10 x 20 = _____	10 x 30 = _____	10 x 40 = _____
11 x 20 = _____	11 x 30 = _____	11 x 40 = _____
12 x 20 = _____	12 x 30 = _____	12 x 40 = _____

Try This

1. Multiply a series of numbers with 50, 60 and 70. What is the pattern that you observe? Is it the same as shown above?

Are they equal?

(a)	2 x 8 = _____	(b)	6 x 7 = _____	(c)	9 x 8 = _____
	8 x 2 = _____		7 x 6 = _____		8 x 9 = _____
(d)	10 x 5 = _____	(e)	12 x 3 = _____	(f)	13 x 5 = _____
	5 x 10 = _____		3 x 12 = _____		5 x 13 = _____

Take any two numbers of your choice, multiply as above and see whether the above relationship is true. Do this with as many numbers as you want.

What conclusion can you draw?

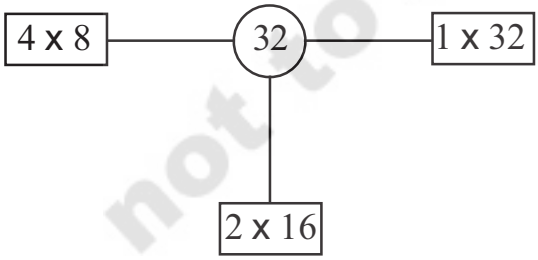
Do This

1. Fill in the blanks

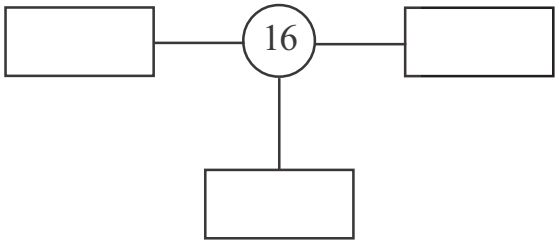
(a)	8 x 9 =_____ x 8	(b)	4 x 10 =_____
(c)	7 x 100 =_____	(d)	16 x 5 = 5 x _____
(e)	9 x _____ = 15 x 9	(f)	9 x 70 =_____
(g)	12 x 50 =_____	(h)	_____ x = 8 x 23

2. Fill the boxes. One has been done for you.

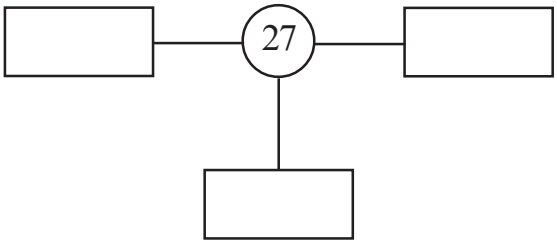
(a)



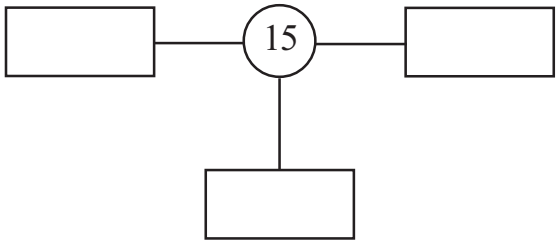
(b)



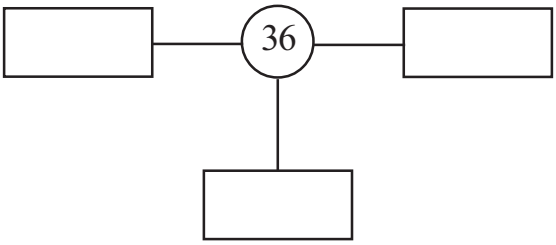
(c)



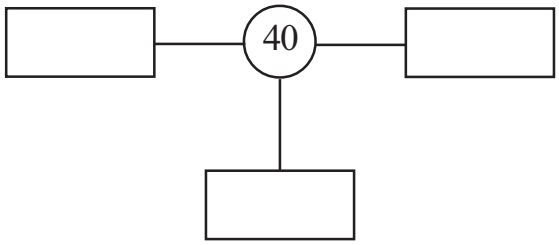
(d)



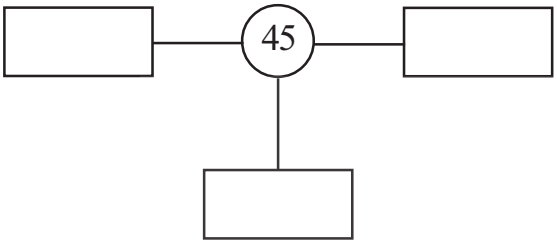
(e)



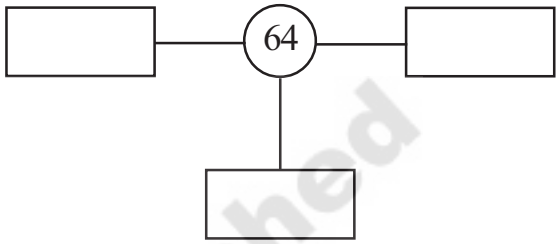
(f)



(g)



(h)



3. Make word problems on multiplication using the information provided in the pictures given below.

(a)

(b)

(c)

(d)

Multiplying bigger numbers

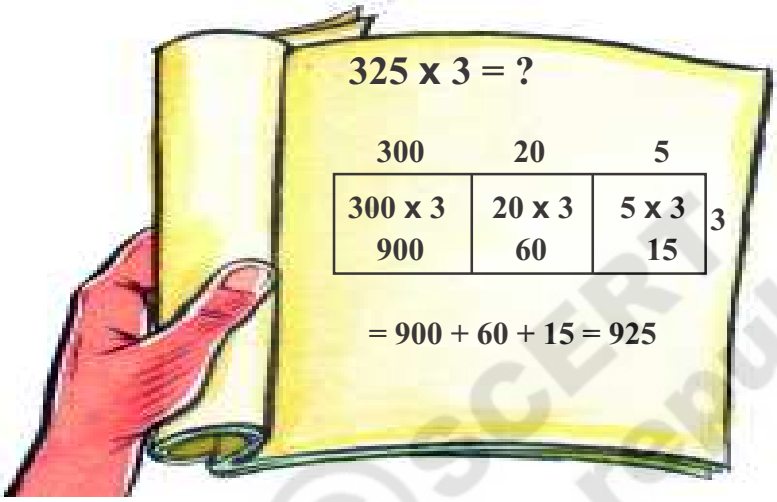
The teacher then wrote this word problem on the board-

If a bag of rice costs ₹ 325 then how much will three bags cost?

325 x 3 = ?

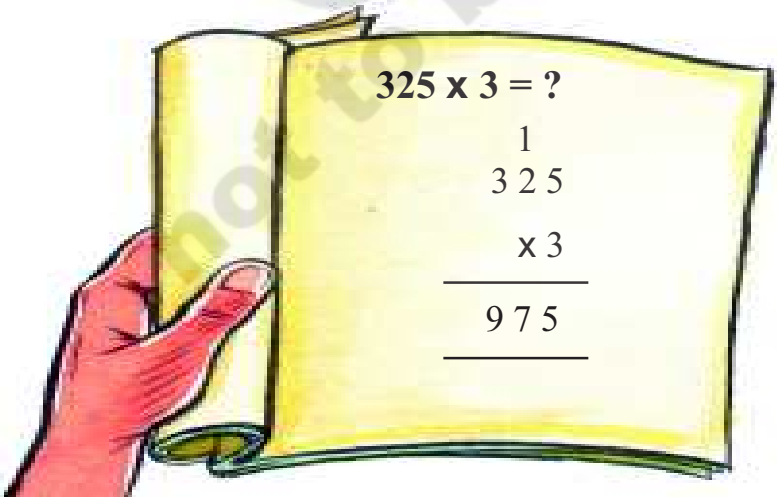
Sita and Dharma did this problem differently.

Sita did it like this-



I first split 325 into 100s, 10s and 1s. I first multiplied 300 with 3, then 20 with 3 and then 5 with 3. In the end I added all the products.

Dharma did it like this-



I first multiplied the digit in the units place with 3. The product was 15. I carried over the 10 in 15 to the tens place showed this by writing 1 on top of 2.

I then multiplied the digit in the tens place with 3. I added the 1 that I had carried over to this product and wrote 7 in the tens places.

Then I multiplied the digit in the hundreds place with 3.

The teacher then I wrote the this problem on the board-

45 x 23 = ?

Sita did it like this-

40	5	
800	100	20
120	15	3

45 x 23 = 800 + 100 + 120 + 15 = 1035

Sita has split both 45 and 23 and then multiplied

Dharma did it like this-

```
   1
   4 5
 x 2 3
-------
   1 3 5
   9 0 0
-------
 1 0 3 5
-------
```

Teacher : Good! All of you have used different methods. All your answers are correct. Discuss with your friends the differences in the methods.

Do This

1. Use Sita, Akhila & Dharma's methods to solve the problems given below.
   (a) 85 x 21 (b) 157 x 4
2. In a function hall chairs are arranged in 35 rows. Each row contains 19 chairs. What is the total number of chairs arranged in the function hall?
3. The weight of one bag of rice is 50 kgs. How much do 17 such bags weigh in all?
4. The weight of a goat is 27 kgs. If the weight of a horse is 18 times the weight of the goat, then what is the weight of the horse?
5. The bus ticket from Nalgonda to Miryalguda costs ₹ 38. If 42 passengers travel in this route, how much money will they pay for the bus tickets?
6. A machine wraps 235 boxes of toys in an hour. How many boxes of toys can it wrap in 4 hours?
7. A truck can carry 140 bags of cement. How many bags of cement can five such trucks carry?

Do not find the exact answer! Just estimate

The teacher asked Sudha, about how many people are there in your village?

There are 40 families in my village. Some families have 3 members or less and some have 4-5 members. Let me assume that all families have 4 members each.

So about 40 x 4 = 160 people are living in my village.

(a) Now, can you estimate the number of people living in your village?

The teacher then wrote this problem on the board and asked children to choose an answer closest to the correct answer.

One note book costs ₹ 9. How much will 22 such notebooks cost?

300 250 200

I cannot carry less than ₹ 9 per book. If I carry ₹ 10 for every book, I can quickly multiply.
22 x 10=220.

So, Sudha correctly ticks ₹ 220.

Do This

1. Now, can you estimate closest to the actual products.

(a) There are 26 mangoes in each basket. How many mangoes will be there in 19 such baskets?

460 480 500

(b) The cost of each movie ticket is ₹ 25. If 28 students of a class go to watch the movie, how much money they have to pay for the tickets?

₹ 800 ₹ 750 ₹ 900

(c) Sathaiah wants to plant some trees in his field. He wants to plant in 26 rows. If each row contains 27 plants, how many plants should he buy?

600 780 900

(d) The cost of a folding chair is ₹ 175. What will the cost of 5 such folding chairs be?

₹ 500 ₹ 1000 ₹ 1500

Exercise

1. A school bag costs ₹ 75. How much will 3 such bags cost?
2. During school assembly, 15 students are standing in each row. There are 7 such rows. How many students are standing during assembly?
3. In a carton; there are 6 rows with 24 apples in each row. How many apples are there in all in the cartoon?
4. There are 64 bags of mangoes in an auto trolley. Each bag contain 36 mangoes. How many mangoes are there in the trolley?
5. If one liter of milk costs ₹ 30, find the cost of 85 liters of milk?
6. The length of a scale is 15 cm. The height of an electric pole is 50 times of the scale, find the height of the pole?
7. Ravi earns ₹ 175 per day. His sister earns 3 times of Ravi's earning. How much does Ravi's sister earn in a day?