1 The Fish Tale

Deep under the sea
See the lovely coloured fish
Swimming peacefully

This special poem in three lines is called a Haiku. Such poems about nature are popular in Japan. Here is another Haiku—

The lake, calm, smooth, still
A fish jumps up and returns
Ripples shake the lake

Do you know any poems about fish?

Here are some drawings made by children.



Navyata Class I



Maya Class IV



When you think of fishes what shapes come to your mind?

* Try to use a square and a triangle to draw a fish.



Look for fish designs around you — on cloth, in paintings, on mats, etc.

'Meen' means a fish and 'Meenakshi' is a girl whose eyes look like a fish. Can you think of someone who has such eyes?

* Draw a face with 'fish eyes'.

Fishes can have very different sizes. The smallest fish is about 1 cm long. How long is the biggest fish you can imagine? _____

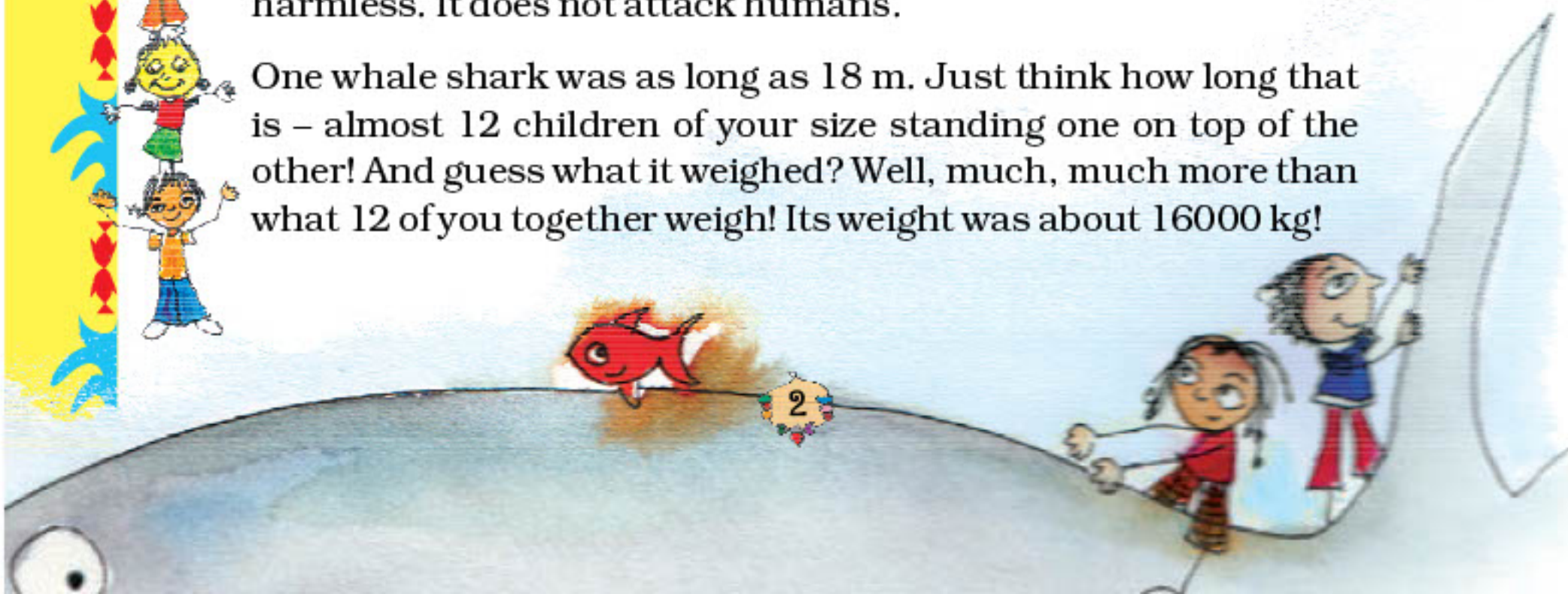
* How many times longer is your big fish than the smallest fish?

The biggest fish is the **whale shark**. It is actually not a whale but



is a big, big fish. Whales are different from fish. Whales breathe like we do, through their noses. But fish have no noses and they take in water, not air. Whales give birth to babies, but fish lay eggs. The whale shark fish looks big and dangerous, but is quite harmless. It does not attack humans.

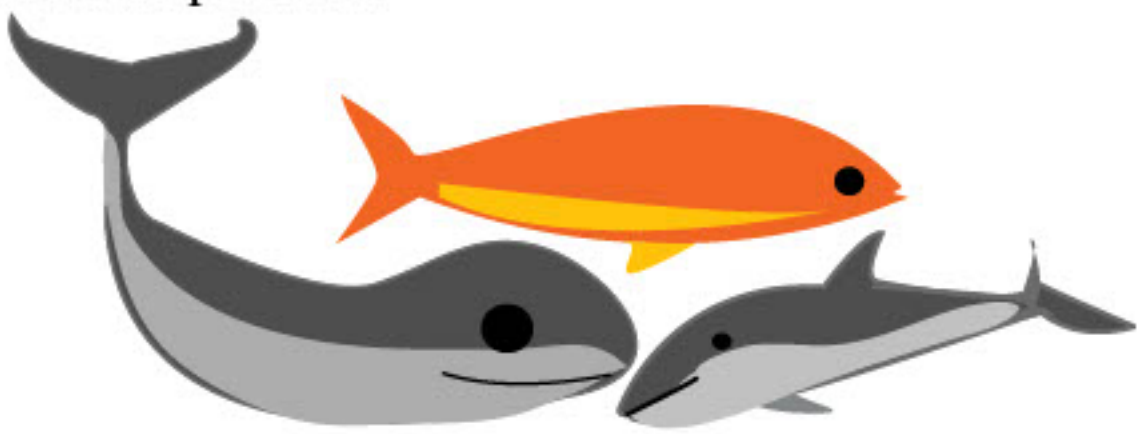
One whale shark was as long as 18 m. Just think how long that is – almost 12 children of your size standing one on top of the other! And guess what it weighed? Well, much, much more than what 12 of you together weigh! Its weight was about 16000 kg!



- About how many kilograms do you weigh? _____
- So 12 children like you put together will weigh about _____ kg.
- About how much more does the whale shark weigh than 12 children like you put together? _____

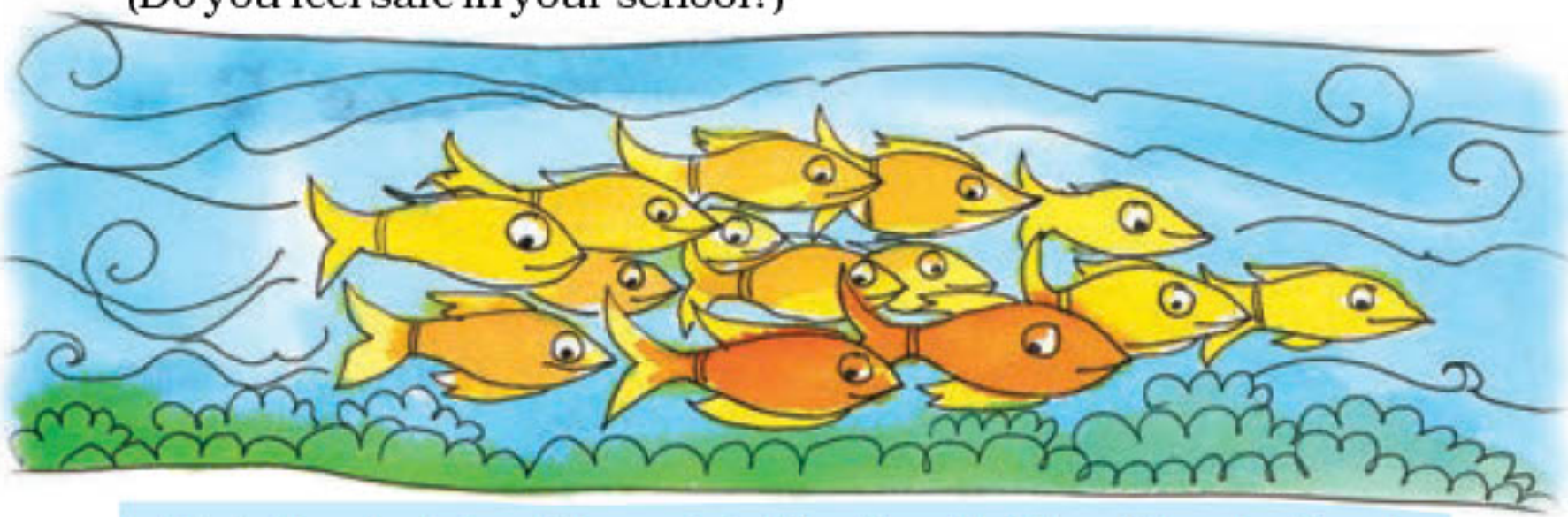
The Fish Tail

To see the difference between whales and fish look carefully at their tails. Can you see that the fish tail stands flat along its body, but the tail of the whale almost looks like two legs. Can you spot the fish in the picture?



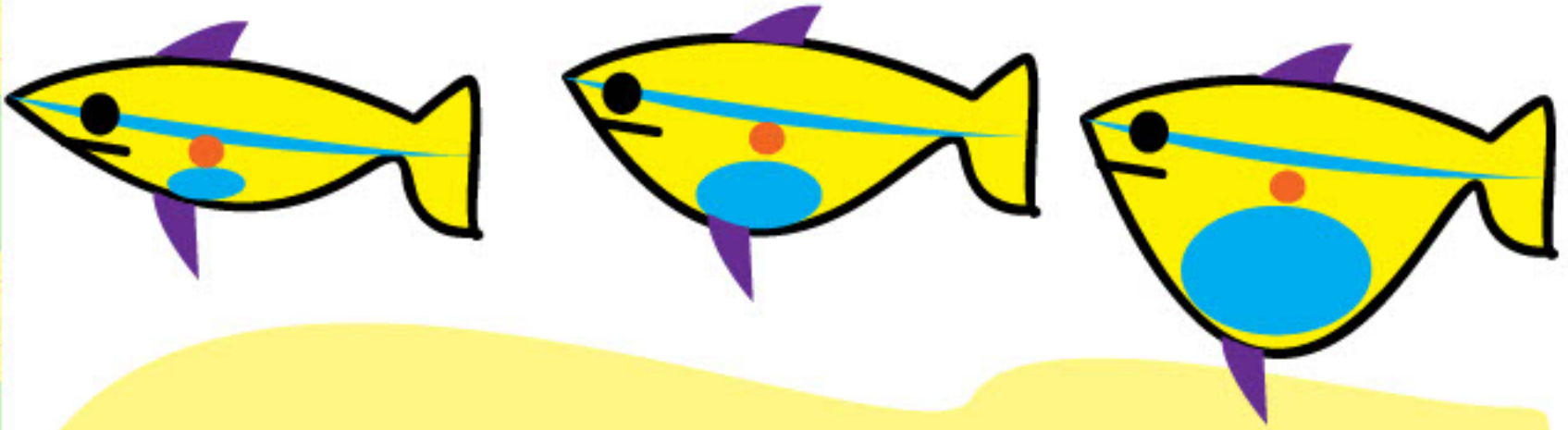
"Schools" of Fish!

Fish like to swim together in the sea in big groups called "schools" of fish. In their school they feel safe from the bigger fish. (Do you feel safe in your school?)



This is a thematic chapter which presents to children the world of fish and fish workers through an integrated approach. Mathematical concepts, such as shapes, estimation, sense of large numbers, simple operations, speed, loans, etc. are woven into real-life contexts to allow a creative revision of some ideas learnt earlier.

To scare away the bigger fish, some small fish drink up a lot of water, swell up and look big!



* Jincy used these shapes to make drawings of fish. Now you also use some shapes to draw the different sea animals shown below.

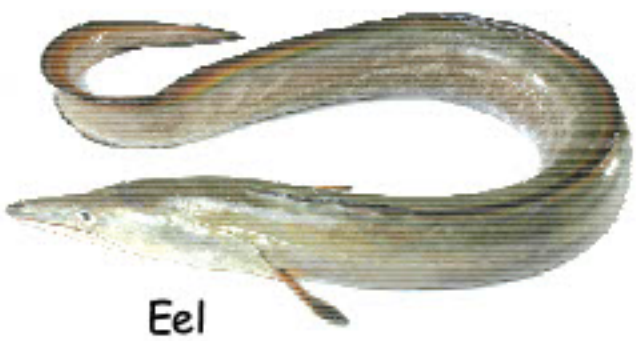




Sea urchin



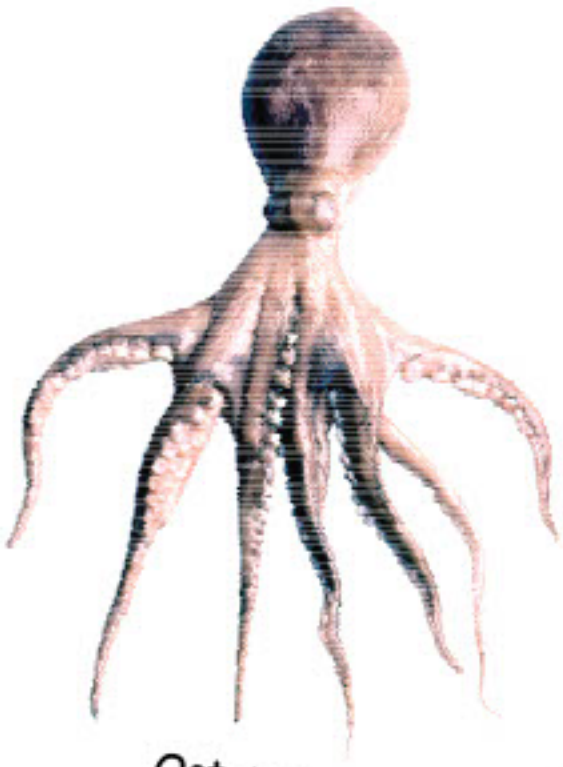
Lobster



Eel



Red snapper



Octopus



Clam



Parrot fish



Prawn



Cuttle fish



Jelly fish



Squid



Silver pomfret



Crab

* Which of these sea animals have you seen before?

Fishermen in their Boats

How many of you have seen the sea? Where did you see it? Did you see it in a movie or for real? How deep do you think the sea could be? Find out.

Do you know how to swim? Would you be scared of the high sea waves?

* Close your eyes and imagine the sea with waves rising high.
* How high do you think the waves can go? _____





Log boat

Imagine that there are fishermen in their boats, going up and down with the waves. They start their trip when it is still dark. Some go on a simple boat made from logs of wood tied together. If the sea is rough, with very high tides and a strong wind, then these fishermen have a very difficult time.

These log boats do not go very far. If the wind is helpful, they travel about 4 km in one hour.

* How long will they take to go a distance of 10 km?
* Guess how far you can go in one hour if you walk fast.



Log boat



Fishermen can feel the wind and look at the sun to find out which way to go. Many of us would get lost and not be able to find our way on the sea where you only see water, water, and nothing else!

Find out

Look at the sun and find out the direction from where it rises.

* From where you are, what interesting thing do you see to your east?
* Name two things that are lying to your west.

What a Catch!

Out on the sea, fishermen look for a place where they hope to find a good catch of fish. There they spread their nets. They will have to wait for many hours for the fish to come into their nets.



What a long sword-fish!

* Look at the different types of boats.

Some boats have motors and go further into the sea. Since they go far out they can catch more fish. These boats travel faster, at the speed of about 20 km in one hour.



Oar boat

* How far would the motor boats go in three and a half hours?
* How much time will they take to go 85 km?



Motor boat



Motor boat



Long tail boat



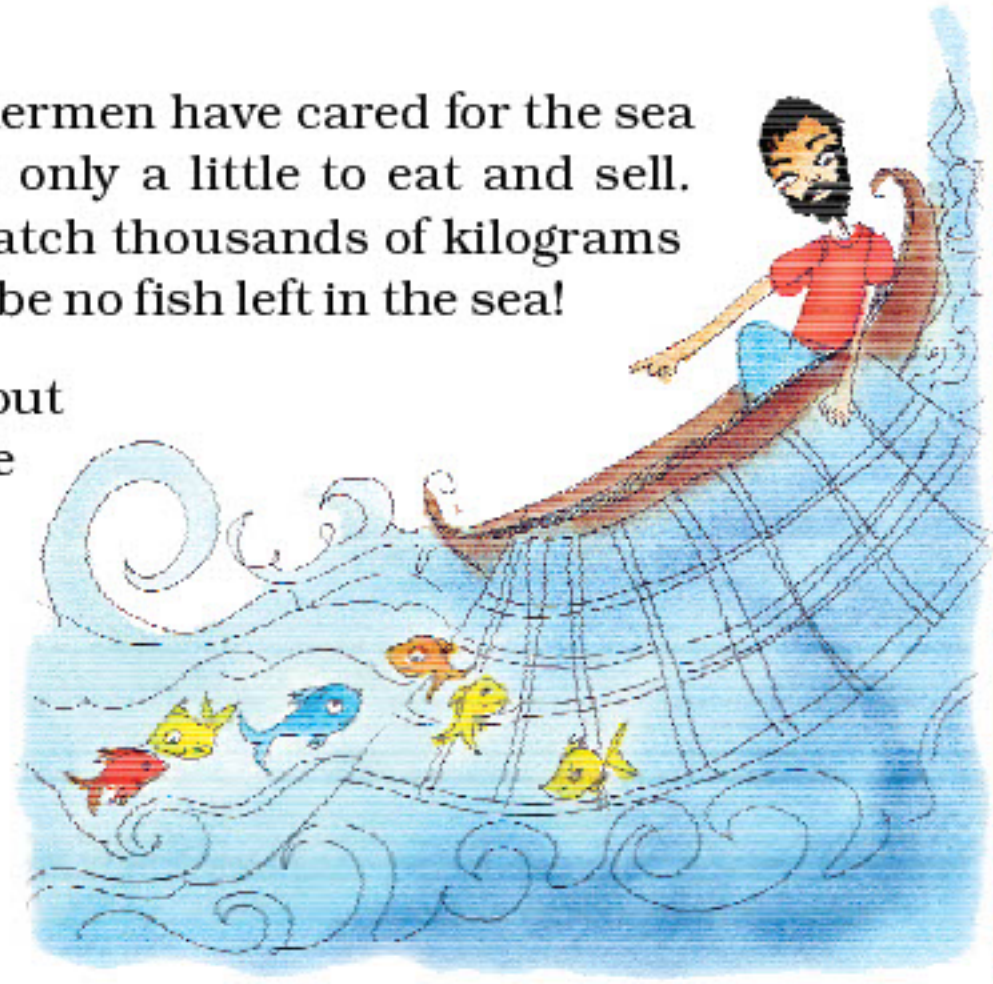
Big machine boat (trawler)



But the fishermen are now very worried. There are some very big machine boats (trawlers) in the business. They go far out and put their big nets deep in the sea. This way they collect a whole lot of fish, leaving very few near the sea shore. They also stay out on the sea for many days.

These big machine boats also catch the small baby fish, which have yet to grow up. Fishermen in the smaller boats always let the baby fish pass through their nets to go back into the sea. They choose a net size in such a way that only the grown up fish are caught.

For hundreds of years fishermen have cared for the sea and its fishes, and fished only a little to eat and sell. They say that if trawlers catch thousands of kilograms of fish everyday, there will be no fish left in the sea!



* Write a news report about the dangers faced by the fishes in our rivers and seas.

Which Boat Gets How Much?

In one trip the log boat brings about 20 kg of fish. But other types of boats bring a bigger catch as given in the table. The table also shows the speed of each type of boat, which is how far each boat goes in one hour. Look at the table and calculate —

a) About how much fish in all will each type of boat bring in seven trips?

b) About how far can a motor boat go in six hours?

c) If a long tail boat has to travel 60 km how long will it take?

Type of boat	*Catch of fish in one trip (in kg)*	*Speed of the boat (how far it goes in one hour)*
Log boat	20	4 km per hour
Long tail boat	600	12 km per hour
Motor boat	800	20 km per hour
Machine boat	6000	22 km per hour

Some Big, Big Numbers!

In the Class IV Math-Magic you heard of the number **'lakh'** which is equal to a hundred thousand. You had read that there are about one lakh brick kilns in our country, where bricks are made.

* What other things have you heard of in lakhs?

* Write the number one thousand. Now write one hundred thousand. So how many zeroes are there in the number one lakh? Easy, isn't it?

* There are about two lakh boats in our country. Half of them are without a motor. What is the number of boats with a motor? Write it.

* About one fourth of the boats with a motor are big machine boats. How many thousand machine boats are there? Come on, try to do it without writing down.

We might wonder about the number of people whose lives are related to fish. In all there are about one hundred lakh fishworkers — who catch fish, clean and sell them, make and repair nets and boats, etc. We also have a name for this big number — **'one hundred lakh'** is called a **crore**.



* Where have you heard of a crore? What was the number used for?

* Try writing the number one crore. Don't get lost in all the zeroes!



The Fish Market

Have you been to a fish market? If you have then you might know why a very noisy place is sometimes called a 'fish market'!

This fish market is busy today. Many boats have brought a good catch. The fisherwomen are shouting out their prices to the buyers.

Mini — "Come here! Come here! Take sardines at ₹ 40 a kg".

Gracy — "Never so cheap! Get sword-fish for ₹ 60 a kg".



Floramma sells prawns for ₹ 150 a kg.

Karuthamma sells squid for ₹ 50 a kg.

Look, Fazila can hardly carry this big kingfish! She says, "This fish weighs 8 kg. I will sell the whole for ₹ 1200".

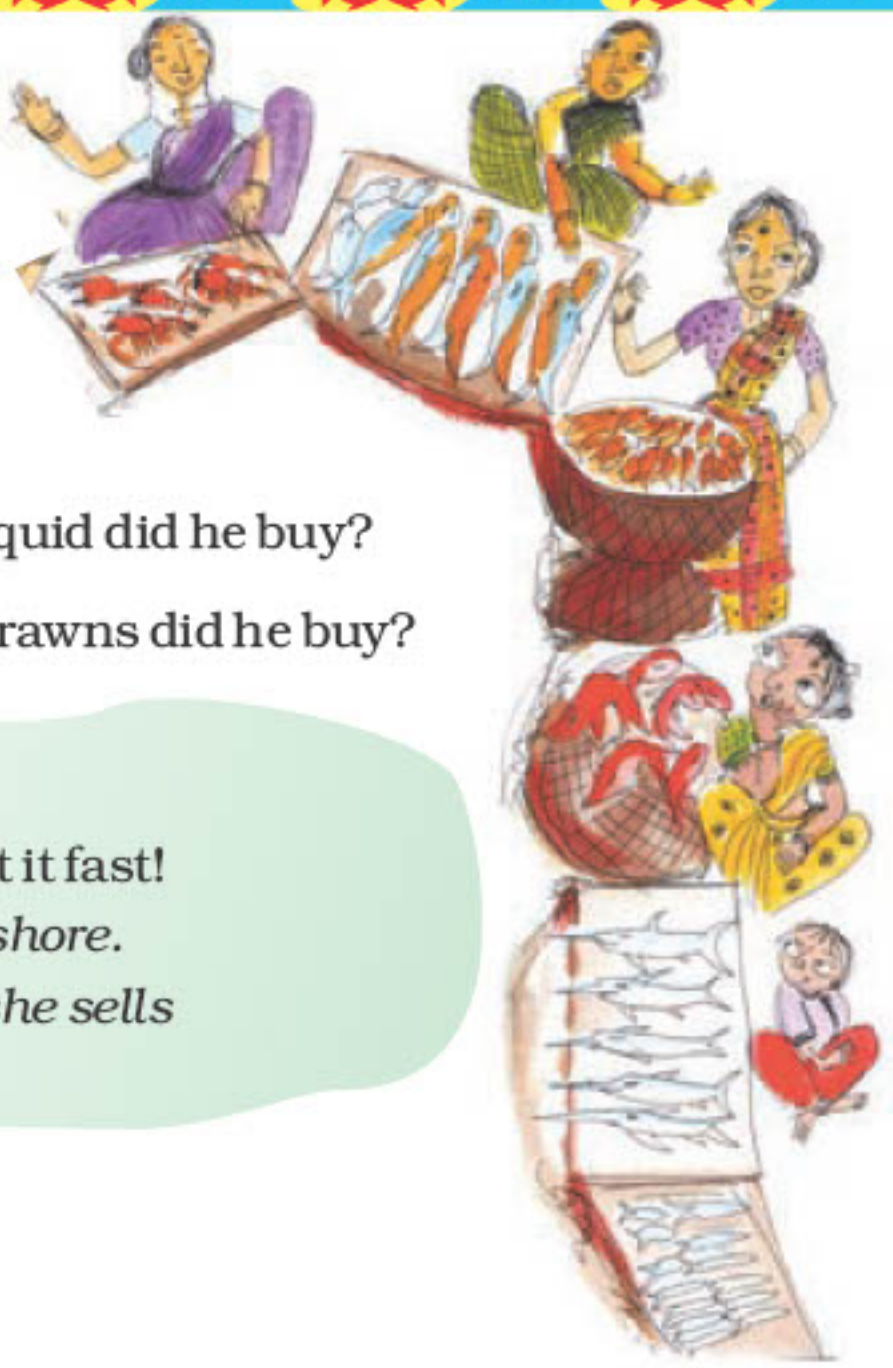
Practice Time

1) At what price per kg did Fazila sell the kingfish?

2) Floramma has sold 10 kg prawns today. How much money did she get for that?

3) Gracy sold 6 kg sword fish. Mini has earned as much money as Gracy. How many kg of sardines did Mini sell?





4) Basheer has ₹ 100. He spends one-fourth of the money on squid and another three-fourth on prawns.

a. How many kilograms of squid did he buy?

b. How many kilograms of prawns did he buy?

Try saying this fast!

Here is a tongue twister. Repeat it fast!

She sells sea shells on the sea-shore.
She is sure that the shells that she sells
will be there no more.

Women's 'Meenkar Bank'

The meeting of the Meenkar Bank has just begun. Fazila is the president. Twenty fisherwomen have made their own bank. Each saves ₹ 25 every month and puts it in the bank.

* How much money does the group collect each month?

* How much money will be collected in ten years?

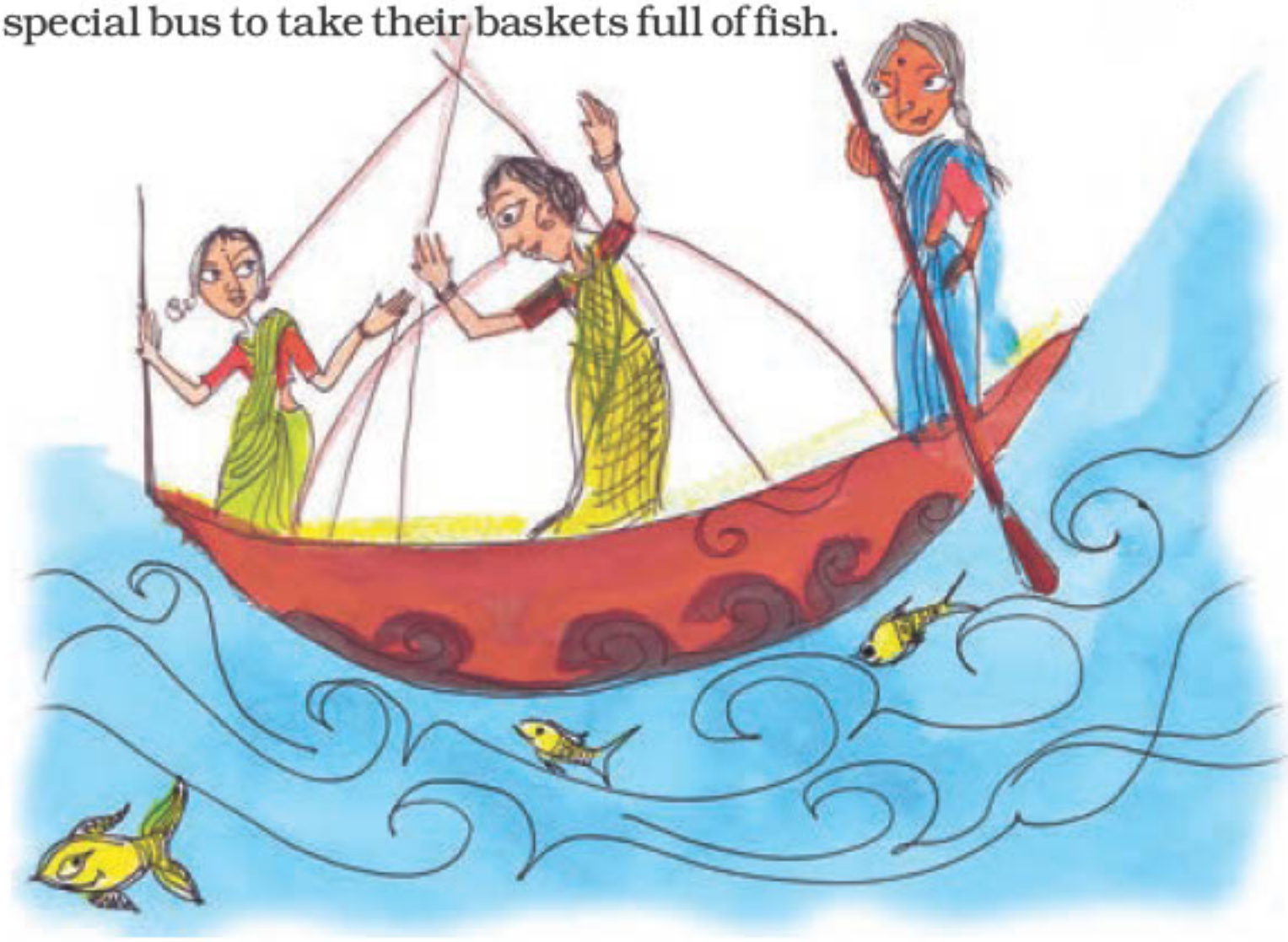
Practice time

Gracy needs money to buy a net. Jhansi and her sister want to buy a log boat. So they take a loan from their bank. They will return it with interest.

a) Gracy took a loan of ₹ 4000 to buy a net. She paid back ₹ 345 every month for one year. How much money did she pay back to the Bank?

b) Jhansi and her sister took a loan of ₹ 21,000 to buy a log boat. They paid back a total of ₹ 23,520 in one year. How much did they pay back every month?

Earlier women did not go on the boat to fish. But now Jhansi and some others are going on the boats during the day. Things are changing now and their Bank helps them. They have also got a special bus to take their baskets full of fish.



Why Don't We Start a New Fish-drying Factory?

The women of Meenkar Bank also want to start a factory to dry fish. The Panchayat has given them some land for that. Over the years they have saved ₹ 74,000. They find out how much they will need for the factory.

Fazila writes the things they need to buy to begin. See the table for the cost of each item and the number of items they want to buy. Find the total cost.

Item	*Price of each*	*Number of items*	*Cost*
Bore well for fresh water	₹ 3000	1	
Bamboo rack for fish drying	₹ 2000	20	
Cement tank	₹ 1000	4	
Tray and knife	₹ 300	20	
Bucket	₹ 75	20	



Total cost to set up the factory = _____

When fresh fish is dried it becomes $\frac{1}{3}$ its weight.

In one month they plan to dry 6000 kg of fresh fish.

How much dried fish will they get in a month? _____



Floramma — Let us first calculate for 6 kg of fresh fish.

We buy fresh fish for	₹ 15 per kg
We sell dried fish for	₹ 70 per kg

We dry 6 kg fresh fish to get ____ kg dried fish

For 6 kg fresh fish we have to pay 6 × __ = ₹ 90

We will sell 2 kg dried fish and get 2 × __ = ₹ __

So if we dry 6 kg fresh fish we will earn __ _ 90 = ₹ __

But if we dry 6000 kg we can earn ₹ __ × 1000 in one month!





They are all very happy with this plan. The group can make profits and each woman can get a salary for the work she does.

Jhansi — I found that for 6000 kg fish we would need 1500 kg salt every month! Its price is ₹ 2 per kg.

Monthly costs:

a) Salt 1500×2 = ₹ ____

b) Packing and bus charges = ₹ 3000

So the total monthly cost of drying, packing and bus charges = ₹ ____

Fazila — That sounds very good! Our calculations tell us that every month our Bank will earn ₹ 44,000!

* Check to see if you also get the same answer.



Find out

Songs sung by fishermen are beautiful. Find out about the words and tunes of such songs.