

Class 5
Sub-Maths
Unit-1 (The Fish Tale)

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1. Do you know any poem about fish?

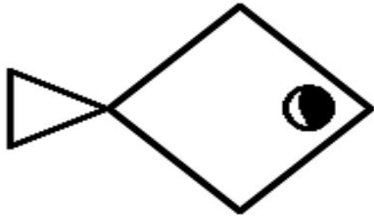
Solution:-

Yes. The poem is written below,
One, two, three, four, five.
Once I caught a fish alive,
Six, seven, eight, nine, ten,
Then I let it go again.
Why did you let it go?
Because it bit my finger so.
Which finger did it bite?
This little finger on the right.

2. Try to use a square and a triangle to draw a fish?

Solution:-

By using a square and a triangle we can draw a fish like below,



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2. How long is the biggest fish you can imagine?

Solution:-

One whale shark was as long as 18 m. So, I can imagine that a fish is about 18 metre long.

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

Solution:-

Fishes can have very different sizes. The smallest fish is about 1 cm long and biggest fish is about 18 m long.

So, $1 \text{ m} = 100 \text{ cm}$

Then, $18 \text{ m} = 18 \times 100 = 1800 \text{ cm}$.

∴ Big fish is 1800 times longer than the smallest fish.

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1. About how many kilograms do you weigh?

Solution:-

I weigh about 30 kilograms.

2. So, 12 children like you put together will weigh about kg.

Solution:-

The weight of one child is 30 kg.

Then,

Weight of 12 children me put together = 12×30

= 360 kg

So, 12 children like me put together will weigh about 360 kg.

3. About how much more does the whale shark weigh than 12 children like you put together?

Solution:-

Whale shark weight was about 16000 kg.

Weight of 12 children me put together = 360 kg

Then, how much more does the whale shark weigh than 12 children,

= Whale shark weight - Weight of 12 children me put together

= $16000 - 360$

= 15,640 kg

∴ the whale shark will weigh 15,640 kg more than the Weight of 12 children me put together.

[Fishermen in their boat Page: 5 – 6](#)

1. 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.

Solution:-

I and many of my friends have also seen the sea. I have seen the sea at Mangalore. I have seen the see in a movie and also in real. I think the depth of the sea is more than 500 feet.

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

Solution:-

No, I don't know how to swim. Yes, I scared of the high sea waves.

3. Close your eyes and imagine the sea with waves rising high.

Solution:-

Yes, I can imagine the sea with waves rising high it was amazing.

4. How high do you think the waves can go?

Solution:-

I think that, the waves can go more than 45 meters.

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

1. How long will they take to go a distance of 10 km?

Solution:-

These log boats take one hour to travel 4 km,

Then, log boat take two hours to travel = $2 \times 4 = 8$ km
 But in half an hour the log boat will travel = $4/2 = 2$ km
 \therefore the total time they take to go a distance of 10 km = 2 and half an hour.
 For 2 hours boat travel = 8 km
 For $\frac{1}{2}$ an hour boat travel = 2 km
 $= 8 + 2 = 10$ km

2. Guess how far you can go in one hour if you walk fast.

Solution:-

I think, I can cover 5 km to 6 km if I walk fast.

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Find out

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.

3. How far would the motor boats go in three and a half hours?

Solution:-

As mentioned in the question these motor boats travel at the speed of about 20 km in one hour.
 Then the distance travel by motor boats in three and half an hours = 20×3.5
 $= 70$ km

4. How much time will they take to go 85 km?

Solution:-

As mentioned in the question these motor boats travel at the speed of about 20 km in one hour.
 Then the distance travel by motor boats in four hours = 20×4
 $= 80$ km

The distance travel by motor boats in $\frac{1}{4}$ hour = $\frac{1}{4} \times 20$
 $= 5$ km

\therefore the total time taken by motor boat to go a distance of 85 km = 4 hours 15 minutes.

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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 —

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

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

Solution:-

Type of boat	Catch of fish in one trip (in kg)	Catch of fish in 7 trips (in kg)
Log boat	20	$7 \times 20 = 140$
Long tail boat	600	$7 \times 600 = 4200$
Motor boat	800	$7 \times 800 = 560$
Machine boat	6000	$7 \times 6000 = 42000$

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

Solution:-

Type of boat	Speed of the boat (how far it goes in one hour)	Distance covered by a boat in 6 hours (Distance = speed \times time)
Log boat	4 km per hour	$4 \times 6 = 24$ km
Long tail boat	12 km per hour	$12 \times 6 = 72$ km
Motor boat	20 km per hour	$20 \times 6 = 120$ km
Machine boat	22 km per hour	$22 \times 6 = 132$ km

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

Solution:-

From the given table long tail boat travel at a speed of 12 km per hour.

So, time taken by the long tail boat to travel 60 km = distance/speed
 $= 60 \div 12$
 $= 5$ hours.

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Some Big, Big Numbers!

In the Class IV Math-Magic you heard of the number 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.

1. What other things have you heard of in lakhs?

Solution:-

- (i) Cost of truck
- (ii) Cost of bus
- (iii) Population in towns, etc.

2. 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?

Solution:-

One thousand = 1000

One hundred thousand is also called as one lakh = 1, 00, 000

Then total number of zeros in one lakh = 5

3. 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.

Solution:-

From the question it is given that, there are about two lakh boats in our country.

Then, half of them are without a motor.

The number of boats with a motor = $2,00,000 \div 2$

= 1,00,000 motors.

4. 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.

Solution:-

From the question it is given that, about one fourth of the boats with a motor are big machine.

Number of boats = 10,000

$\frac{1}{4} \times 10,000 = 25000$

Therefore, number of machine boats = 25000

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

Solution:-

I heard of a crore in population of country.

1 crore = 1,00,00,000

Total number of zeros are 7.

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

Solution:-

Fazila can hardly carry the big kingfish and she says, this fish weighs 8 kg. So, she will sell the whole for ₹ 1200.

Then, the price of that kingfish for one kg = $1200 \div 8$

= ₹ 150 per kg

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

Solution:-

Floramma sells prawns for ₹ 150 a kg.

Given, Floramma has sold 10 kg prawns today.

So, total amount she get = 150×10

= ₹ 1500

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

Solution:-

Given, Gracy sold 6 kg sword fish,

Then price of one kg of sword fish = ₹ 60

Total money earned by Gracy = 6×60

= ₹ 360

Mini sold sardines at ₹ 40 per kg.

Total weight of sardines sold by Mini = $360/40$

= 9 kg.

4) Basheer has Rs 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?

Solution:-

Given, Basheer has ₹ 100.

He spends one-fourth of the money on squid = $\frac{1}{4} \times 100$
= ₹ 25

Karuthamma sells squid for Rs 50 a kg.

Basheer bought = $25/50$ kg

= $\frac{1}{2}$ kg of squid.

b. How many kilograms of prawns did he buy?

Solution:-

Given, Basheer has ₹ 100.

He spends another three-fourth on prawns = ₹ 75

Floramma sells prawns for Rs 150 a kg.

Basheer bought = $75/150$

= $\frac{1}{2}$ kg of prawns.

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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 Rs 25 every month and puts it in the bank.

1. How much money does the group collect each month?

Solution:-

There are twenty fisherwomen in the Women's 'Meenkar Bank'.

Each saves ₹ 25 every month

So, total money collected in bank each month = 20×25
= ₹ 500

2. How much money will be collected in ten years?

Solution:-

So, from the above solution total money collected in bank per month = ₹ 500

Then, total money collected in bank in one year = 12×500

= ₹ 6000

Now, total money collected in bank in 10 years = 6000×10

= ₹ 60000

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 Rs 4000 to buy a net. She paid back Rs 345 every month for one year. How much money did she pay back to the Bank?

Solution:-

From the question it is given that,

Gracy took a loan of ₹ 4000 to buy a net.

She paid back ₹ 345 every month for one year.

Then,

$$\begin{aligned}\text{Total money she paid in one year to bank} &= 12 \times 345 \\ &= ₹ 4,140\end{aligned}$$

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

Solution:-

From the question it is given that,

Jhansi and her sister took a loan of Rs 21,000 to buy a log boat.

They paid back a total of ₹ 23,520 in one year.

Then,

$$\begin{aligned}\text{Total amount they pay back in every month} &= ₹ 23,520/12 \\ &= ₹ 1,960\end{aligned}$$

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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 Rs 74,000. They find out how much they will need for the factory.

1. 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 (in ₹)
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 its weight. In one month they plan to dry 6000 kg of fresh fish.

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

Solution:-

Item	Price of each	Number of items	Cost (in ₹)
Bore well for fresh water	₹ 3000	1	$1 \times 3000 = 3000$
Bamboo rack for fish drying	₹ 2000	20	$20 \times 2000 = 40000$
Cement tank	₹ 1000	4	$4 \times 1000 = 4000$
Tray and knife	₹ 300	20	$20 \times 300 = 6000$
Bucket	₹ 75	20	$20 \times 75 = 1500$

Total cost to set up the factory,
 $= 3000 + 40000 + 4000 + 6000 + 1500$
 $= ₹ 54500$

In one month they plan to dry 6000 kg of fresh fish = $\frac{1}{3} \times 6000$
 $= 2000$ kg

2. 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.

(i) We dry 6 kg fresh fish to get _____ kg dried fish

Solution:-

We dry 6 kg fresh fish to get 2 kg dried fish.

(ii) For 6 kg fresh fish we have to pay $6 \times \underline{\hspace{1cm}} = ₹ 90$

Solution:-

For 6 kg fresh fish we have to pay $6 \times 15 = ₹ 90$

(iii) We will sell 2 kg dried fish and get $2 \times \underline{\hspace{1cm}} = ₹ \underline{\hspace{1cm}}$

Solution:-

We will sell 2 kg dried fish and get $2 \times 70 = ₹ 140$

(iv) So if we dry 6 kg fresh fish we will earn $\underline{\hspace{1cm}} - 90 = ₹ \underline{\hspace{1cm}}$

Solution:-

So if we dry 6 kg fresh fish we will earn $140 - 90 = ₹ 50$

(v) But if we dry 6000 kg we can earn ₹ $\underline{\hspace{1cm}} \times 1000$ in one month!

Solution:-

But if we dry 6000 kg we can earn $₹ 50 \times 1000 = ₹ 50000$ in one month.

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

Monthly costs:

a) Salt $1500 \times 2 = ₹ \underline{\hspace{1cm}}$

b) Packing and bus charges = Rs 3000

So the total monthly cost of drying and selling the fish = ₹ $\underline{\hspace{1cm}}$

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

Solution:-

$$(a) \text{ Salt } 1500 \times 2 = ₹ 3000$$

Then,

$$\begin{aligned} \text{The total monthly cost of drying and selling the fish} &= ₹ 3000 + 3000 \\ &= ₹ 6000 \end{aligned}$$

$$\begin{aligned} \text{Hence, earning} &= 50000 - 6000 \\ &= ₹ 44000 \end{aligned}$$