4 What questions can you answer?

In "What questions can you answer?" kind of tasks pupils are provided with situations that include numerical data and / or geometrical figures and are asked to generate questions that can be answered using the given information. This activity is both creative (as pupils have to pose more than one question and hence stretch beyond the obvious) and critical (as pupils have to make sure that the questions they pose are solvable). The teacher must ensure that after completing the task pupils showcase their questions together with solutions and engage in class discussion so that they realize the breadth and depth of questions that can be constructed with the information. The sophistication of the questions posed by individual pupils show their developmental level and this is excellent feedback for the teacher.

EXAMPLE 1

Singapore post

The postage rates for standard sized letters for delivery in Singapore are as follows:

Weight (up to)	Postage
20g	$0.26
40g	$0.32
100g	$0.50
250g	$0.80
500g	$1.00

Write two questions you can answer with the above information.

1. Question 1

_____

2. Question 2

_____

3. Find the answer to your questions.
Show your work.

_____

EXAMPLE 2

The Exhibition

An average of 215 people visited a 4-day exhibition on the first three days.
Another 310 people visited the exhibition on the fourth day.

Write two questions you can answer about the visitors to the exhibition.

1. Question 1

_____

2. Question 2

_____

3. Find the answer to your questions.
Show your work.

_____

Teaching Goal

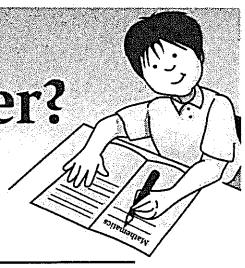
After participating in this lesson, pupils should be cognizant of the breadth and depth of questions that can be constructed with the data given in each problem.

The demand made on them to solve the question they choose to pose will add an element of responsibility in their posing of questions, such as not posing questions that are trivial or nonsensical.

Teaching Plan

1. Present the problem to the pupils.
2. Have pupils read the problem individually.
3. Engage the whole class in a discussion and check for comprehension of the problem.
4. Ask pupils to work in pairs. Allow them to brainstorm and generate as many questions as possible.
5. Ask pupils to select a question and solve it. If time permits, encourage pupils to solve all the questions they have generated.
6. Ask pupils to present their questions and solutions. Create an exhaustive list of all possible questions.
7. Draw to the attention of the pupils questions that are more difficult than others and what make them so.

What questions can you answer?



Name: _____ **Date :** _____

Class : _____ **Levels 3 - 6**

1

Topic: Money

Rino's pizza hut

The menu for Rino's Pizza Hut is as follows:

Rino's Pizza Hut	
Large Pizza	$21.50
Regular Pizza	$15.50
Small Pizza	$7
Spaghetti	$9.50
Garlic Bread	$2.50

Write two questions with the above information.

1. Question 1

_____

2. Question 2

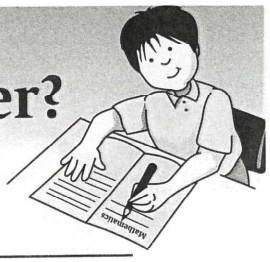
_____

3. Find the answer to your questions. Show your workings.

_____

Created by Pearly Tan

What questions can you answer?



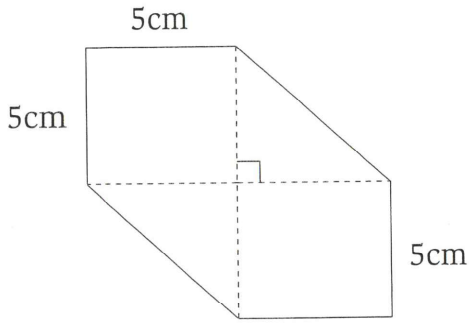
Name: _____ **Date :** _____

Class : _____ **Levels 4 - 6**

2 **Topic: Area and Perimeter**

Folded paper

A square piece of paper is folded to form the shape shown below.



Write two questions you can answer about the shape above.

1. Question 1

_____

2. Question 2

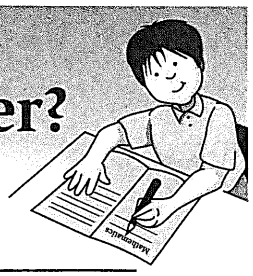
_____

3. Find the answer to your questions. Show your workings.

_____

Adapted from : Shaping Maths (Course book 4A, Q25, p122)
by Phyllis Teo

What questions can you answer?



Name: _____ **Date :** _____

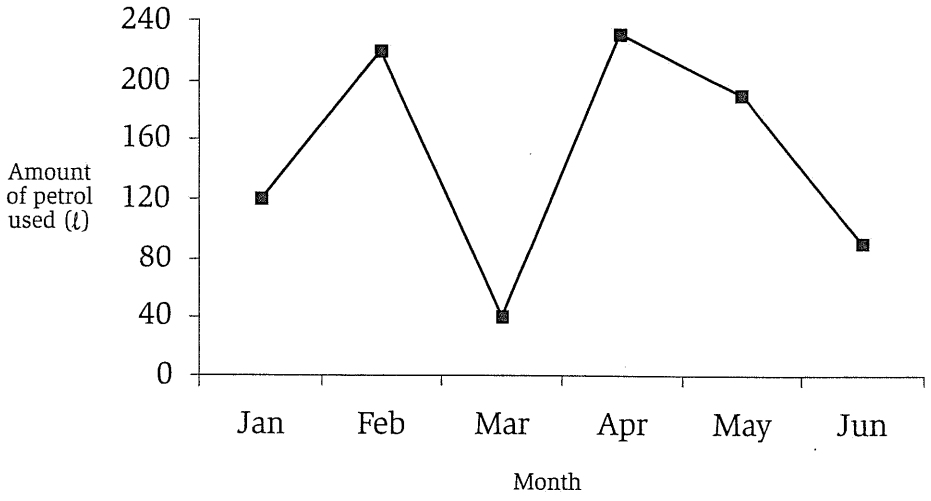
Class : _____ **Levels 4 - 6**

3

Topic: Graphs

Petrol consumption

The line graph shows the amount of petrol Caili's father used in the last 6 months.



Write two questions you can answer about the amount of petrol Caili's father used in the last 6 months.

1. Question 1

_____

2. Question 2

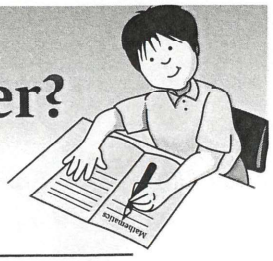
_____

3. Find the answer to your questions. Show your workings.

_____

Adapted from : Shaping Maths (Course book 5B, Q2, p64)
by Tay Ai Ling & Ang Kailing

What questions can you answer?



Name: _____ **Date :** _____

Class : _____ **Levels 5 - 6**

4 **Topic: Fractions**

Sally and school

Sally is at school $\frac{1}{3}$ of the day. She spends $\frac{3}{4}$ of the time in school on lessons.

Write two questions you can answer about the time she spent.

1. Question 1

_____

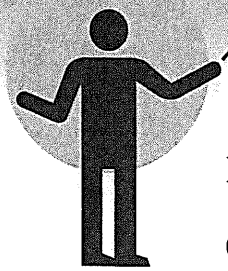
2. Question 2

_____

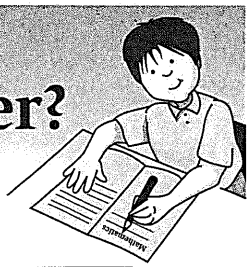
3. Find the answer to your questions. Show your workings.

_____

Created by Teo Yuen Cheng



What questions can you answer?



Name: _____ **Date :** _____

Class : _____ **Level 6**

5

Topic: Percentage

People at the park

60% of the people at a park were adults. 75% of the rest were boys.
There were 140 more adults than girls.
Some more children came to the park, after which 90% of the people at the park were children.

Write two questions you can answer using the information above.

1. Question 1

_____

2. Question 2

_____

3. Find the answer to your questions. Show your workings.

_____

Adapted from : Challenging Problems in Math for Pri Schs Advanced 1, Q3, pg 94.
by Chandraselven Bavani