

Pocket Money – looking at ratio

The ratio of Jo's pocket money to Roxanne's pocket money is 1 : 2

The sum of all the ages of the six is 55 years.

Names of students

Pocket money						
Age						

The ratio of Fran's pocket money to Jo's pocket money is 5 : 1

The ratio of Andy's age to Roxanne's age is 2 : 1

Working out clues and sorting on a grid

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This activity was one of several developed by a group of collaborative learning and maths teachers meeting at the Inner London Education Authority SMILE centre in the 1980s to develop activities that were 'EAL friendly' to be used in mainstream multilingual maths classes. SMILE activities were saved when the ILEA was closed down and their archive can be found at the STEM centre at the University of York (www.stem.org.uk)

On the principle that if it ain't broke don't fix it, we are mining the archive and more work on ratio will appear soon. We have kept the 1980s rates of pocket money! You are welcome to produce an up-to-date version and send it to us!

Last updated 23rd October 2016

Webaddress: www.collaborativelearning.orgpocketmoney.pdf

Our collaborative talk for learning activities are designed to:

...build on prior knowledge.

...move from concrete to abstract thinking.

...ensure everyone works with everyone else.

...extend social language into curriculum language.

...provide motivating ways to go over the same topic more than once.

For more details go to: www.collaborativelearning.org

COLLABORATIVE LEARNING PROJECT

Project Director: Stuart Scott

We support a network of teaching professionals to develop and disseminate accessible talk-for-learning activities in all subject areas and for all ages.

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BRIEF SUMMARY OF BASIC PRINCIPLES BEHIND OUR TEACHING ACTIVITIES:

The project is a teacher network, and a non-profit making educational trust. Our main aim is to develop and disseminate classroom tested examples of effective group strategies that promote talk across all phases and subjects. We hope they will inspire you to develop and use similar strategies in other topics and curriculum areas. We want to encourage you to change them and adapt them to your classroom and students. We run teacher workshops and conferences worldwide but mainly in the UK. The project posts online many activities in all subject areas. An online newsletter is also updated regularly.

*These activities are influenced by current thinking about the role of language in learning. They are designed to help children learn through talk and active learning in small groups. They work best in non selective classes where children in need of language or learning support are integrated. They are well suited for the development of speaking and listening. They provide teachers ideal opportunities for assessment of spoken language.

*They provide scaffolding for differentiation by placing a high value on what children can offer to each other on a particular topic, and also give children the chance to respect each other's views and formulate shared opinions which they can disseminate to peers. By helping them to take ideas and abstract concepts, discuss, paraphrase and move them about physically, they help to develop thinking skills. We strongly endorse the principles of the Learning Without Limits group to which we belong.

*They give children the opportunity to participate in their own words and language in their own time without pressure. Many activities can be tried out in pupils' first languages and afterwards in English. A growing number of activities are available in more than one language, not translated, but mixed, so that you may need more than one language to complete the activity.

*They encourage study skills in context, and should therefore be used with a range of appropriate information books which are preferably within reach in the classroom.

*They are generally work effectively over a wide age range because children can bring their own knowledge to an activity and refer to books at an appropriate level. The activities work like catalysts.

*All project activities were planned and developed by teachers working together, and the main reason they are disseminated is to encourage teachers to work with each other inside and outside the classroom. They have made it possible for mainstream and language and learning support teachers to share an equal role in curriculum delivery. They should be adapted to local conditions. In order to help us keep pace with curriculum changes, please send any new or revised activities back to the project, so that we can add them to our lists of materials.

Pocket Money – looking at ratio

An activity for 2 people.

You will need the Pocket Money Clues.

In this activity you will be sorting out information to find:

- the names of six students
- how much they each receive for pocket money each week
- the age of each student ...

1. Cut out the 16 clues from Pocket Money Clues if they are not cut out already.
2. Sort the information to help you answer the following questions.

- Who receives the same pocket money as their age?
- Who is the youngest?

The following table might help you organise the information.

	Names of students					
Pocket money						
Age						

In this activity you will:

- consolidate understanding of the relationship between ratio and proportion;
- reduce a ratio to its simplest form
- divide a quantity into two or more parts in a given ratio
- interpret and use ratio in a range of contexts, including solving word problems

Pocket Money Clues

The sum of Roxanne and Andy's pocket money is £16

The ratio of Roxanne's pocket money to Andy's pocket money is 3 : 5

The ratio of Jo's pocket money to Roxanne's pocket money is 1 : 2

The sum of Fran's, Tom and Jo's ages is 32 years.

The sum of all the ages of the six is 55 years.

The ratio of Fran, Tom and Jo's ages is 4 : 3 : 1

The ratio of Andy's age to Roxanne's age is 2 : 1

The sum of Andy's and Roxanne's age is 15 years.

The ratio of Fran's pocket money to Jo's pocket money is 5 : 1

The sum of Fran and Jo's pocket money is £18.

The ratio of Tom's pocket money to Jo's pocket money is 3 : 1

The sum of Tom and Bob's pocket money is £21.

The ratio of Bob's pocket money to Roxanne's pocket money is 2 : 1.

The sum of all their pocket money is £55.

The ratio of Jo's age to Andy's age is 2 : 5.

The ratio of Bob's age to Tom's age is 2 : 3.