KIDS MATHS

Heuristics simply means methods that help in problem solving. These methods use techniques like trial-and-error and experimentation methods. Heuristics has become a rapid trend in Singapore since this method is flexible and can have different methods to solve just one problem. Many pupils have since adopted the heuristics approach in solving tough maths problems.

This issue, Maths Heuristics™ gladly shows us how to use the Unit Transfer Methods using one of the scenario – Difference Unchanged Quantities.

Introduction

There are four basic scenarios where the Before and After Concept may be applied.
*Single Unchanged Quantities
*Total Unchanged Quantities
*Difference Unchanged Quantities
*All Changing Quantities

In the last (All Changing Quantities) scenario, a modified version of Unit Transfer Method is used to solve the problem.

There are many ways to solve a problem!

PROBLEM 1

How old is Uncle Sam?

In the year 2001, Jason was 10 years old and his uncle was 38 years old. In which year was Jason's uncle 8 times as old as Jason?
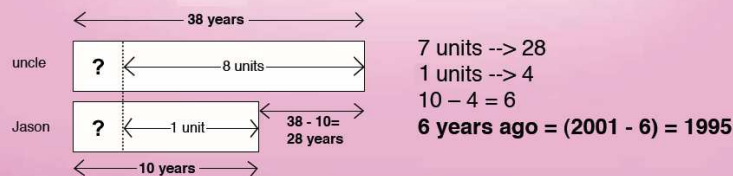
WORKING

Using Difference Unchanged Quantities:
>> We know that age difference will always be same.

Method 1: Guess and Check

Year	Jason	Uncle	Ratio = 8	
2001	10	38	3.8	No
2002	11	39	3.5	No
2000	9	37	4.1	No
1995	4	32	8	Yes

Method 2: Model Approach

7 units --> 28
1 units --> 4
10 − 4 = 6
6 years ago = (2001 - 6) = 1995

Method 3: Unit Transfer Method

	Jason's age	His uncle's age	Age difference	Year
Before	10 years	38 years	28 years	2001
Change	10 - 4 = 6 years	(38 - 32) = 6 years		6 years ago
After	1 unit ↓ 1 unit x 4 = 4 years	8 units ↓ 8 units x 4 = 32 years	(8 - 1) units = 7 units ↓ 7 units x 4 = 28 years	(2001 - 6) = 1995

Let's Apply!

Be the first ten to send in your most creative answers and stand to win a prize from Maths Heuristics™.

Pupils can use the methods taught in this page or any other methods.

Answer both questions correctly

WIN! A copy of "Unit Transfer Method" book by Maths Heuristics™ and a $10 Popular Book voucher.

Remember to include your name, address, email and contact numbers to 50 Playfair Road, #05-02, Noel Building, Singapore 367995.

1. Three brothers, Andy, Benny and Calvin shared some money in the ratio 6:5:1. After their mother gave each of them $27, the ratio became 15:13:5. Find the amount of money each of the boys had at first.

2. There are 200 men and 80 women in Hall A. There are 120 men and 180 women in Hall B. Some adults leave Hall A to Hall B. As a result, the number of men is the same as the number of women in Hall B; and the number of men is thrice the number of women in Hall A. How many women moved from Hall A to Hall B?