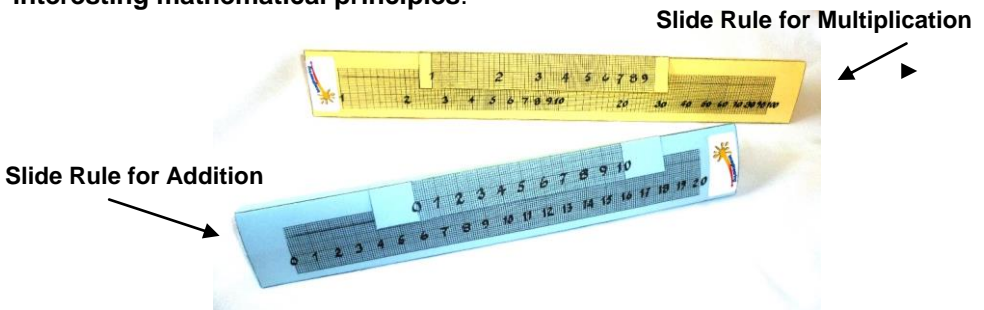




## Instructions for Making Slide Rules - for Addition and Multiplication

The slide rules should look like this when finished. They are used to add and multiply numbers. They used to be commonly used a few years ago before electronic calculators were invented. However they show some very interesting mathematical principles.



### 1. Check that you have the parts

Check that you have the parts and put a tick in the column by each part.

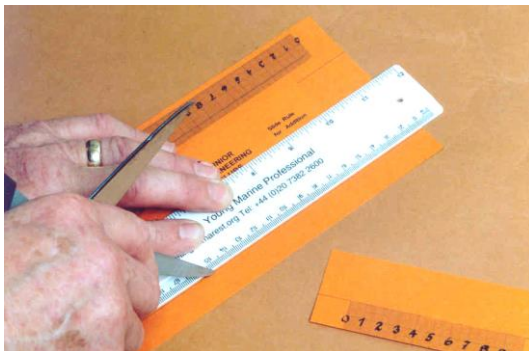
Item	Description	Number	Check
1	A4 Card of Slide rule for Addition	1	
2	A4 Card of Slide rule for multiplication	1	

### 2. Make the Scale and Slide for the Slide Rule for Addition

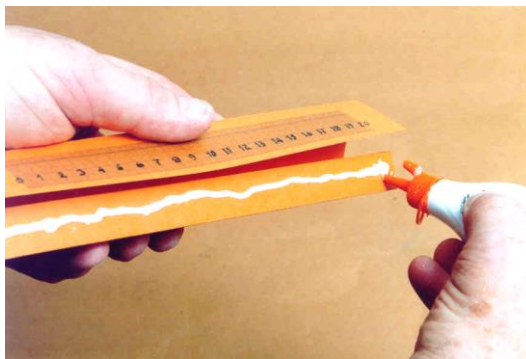
Cut out the scale and slider



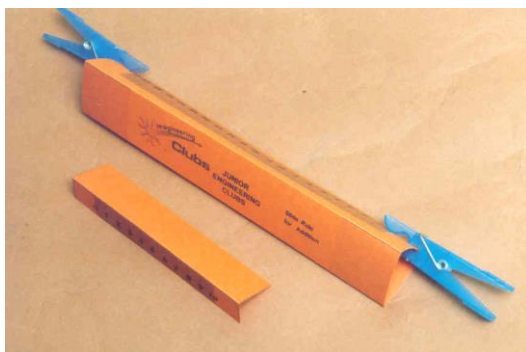
With the back of a pair of scissors and a ruler score the card to make it bend easily



Bend the Scale to make an equilateral triangle and glue.



Hold the Scale in a triangular shape with "Engineering Clamps" or Paper Clips until the glue has set.

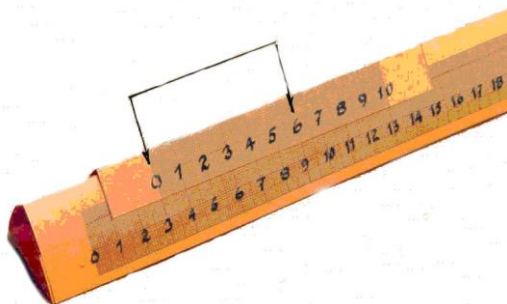


Score and bend the Slider so that it fits on the top of the Scale as shown in the picture.

This shows the slide rule adding 2 to any number up to 10. The upper 0 mark on the Slider is aligned with the lower 2 of the Scale. The answer is given on the lower Scale by the alignment of the number to be added to 2.

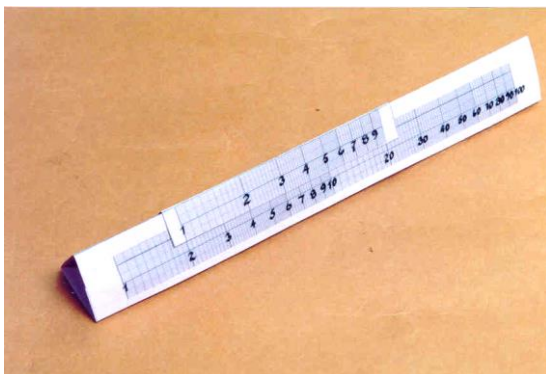


The next picture shows the slide rule set to add 3 to any number. The arrows show 3 being added to 6 to make 9.

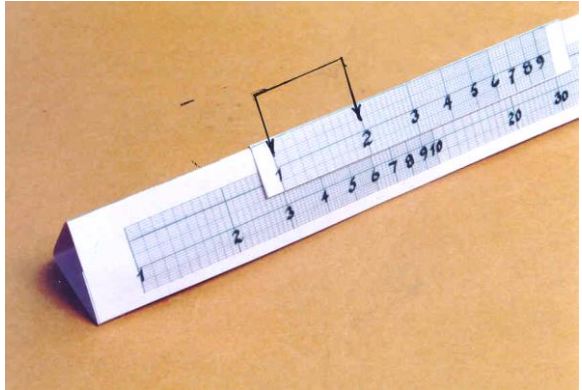


### 3 Make the Scale and Slide for the Slide Rule for Multiplication

Cut out and make the Scale and Slider in exactly the same way as the Addition Slide Rule. This picture shows the slide rule multiplying 2 by any number up to 10. The upper 1 mark of the Slider is aligned with the lower 2 of the Scale. The answer is given by the alignment of the number to be multiplied by 2 on the lower Scale.



This picture shows the slide rule set to multiply 3 to any number. The arrows show 3 being multiplied by 2 to make 6.



#### 4 **Tools required**

Scissors

Glue

Engineering Clamps (pegs) or Paper Clips

#### 5 **Safety**

Normal procedure when using scissors

#### 6 **Topics Learned**

Visualisation of Addition

Indices

Logarithms