

Example IV

We know that at 30 m.p.h., it will take 2 hours (120 minutes) to cover 60 miles. To calculate this we set the arrow on 30 on the **average speed scale**, and opposite 60 on the **miles scale**. We see 12 on the **minutes scale**. We must read this as 120, because we are going upward from 100.

Kilometer Use

All the above examples can be used for Continental rallies where Kilometres are used instead of miles. All that is necessary is to read Km. For miles in each case.

Other Useful Conversions

Miles to Kilometres

Set 50 on **miles scale** again 80 on **minutes scale**. Any number of miles will now have its equivalent in Km. Above it.

e.g. - 45 miles (on **miles scale**) is equal to 72 Km. (on **minutes scale**), 20 miles equals 32 Km. Etc.

Litres to Gallons

Set 10 on miles scale against 45 on **minutes scale**. Read any number on the **miles scale** as gallons, and the equivalent in litres will be seen above on the **minutes scale**.

e.g. - 14 gallons (on **miles scale**) is equal to 63 litres (on **minutes scale**).

Tyre pressure

Pounds per square inch to Grammes per square centimetre.

Set 10 on miles scale against 70 on **minutes scale**. Read lbs. Per square inch on **miles scale** against equivalent grammes per square cm. on **minutes scale**, multiplied by 100.

e.g. - 20 lbs per square inch on **miles scale** is equal to 1,400 grammes per square cm. on **minutes scale**.

**Rally
Mate
COMPUTOR**

INSTRUCTIONS



This Calculator, known as the Mark I, of Standard Rally Model, enables the user to read off instantly the answer to any calculations involving speed, time or distance. No mathematical knowledge is required for its operation.

The examples shown below demonstrate the great ease and speed of the operation.

Example I

To find Speed

42 miles are covered in 70 minutes: what is the average speed?

Set 42 on the **miles scale** opposite 70 on the **minutes scale**. The arrow points to 36 on the **average speed scale**. This is the number of miles per hour.

Example II

To find Time

A car in a competition must average 28 m.p.h. And the distance to be covered is 42 miles: how long should it take?

Set arrow to 28 on **average speed scale** then look above 42 (on the **miles scale**) to the **minute scale**. The answer will be shown as 90 minutes.

If the distance, however, were 420 miles the answer will be read as 900 minutes, both being multiplied by ten.

Example III

To find distance

A driver has 24 minutes left to complete his run and he is averaging exactly 40 m.p.h.: how far will he go?

Set pointer to 40 on **average speed scale** and look below 24 (on the **minute scale**): the answer is read as 16 miles on the **miles scale**.

Using the calculator where the number of miles or minutes is less than 10 or greater than 100

It will be seen that all three scales are calibrated from 10 to 100. This is the general and convenient form for logarithmic scales. If we read round the scale starting at 10 and going round in a clockwise manner the next number we see is 11. If, however, we start reading 10 as 100 this figure 11 must be read as 110; 12 as 120 etc.

Similarly, if we again start at 10, but this time read in anti-clockwise manner, the next number we see will be 95. Since we are now going from 10 **downwards**, this must be read as 9.5 and 90 as 9, etc. until we reach 10 once more, which will be read as 1.

Obviously then, any of the numbers may be read as if it has been divided or multiplied by 10 or multiples of 10. Thus, the number 30 can be read as 0.3, 3, 300, 3.000, etc. as the occasion requires.