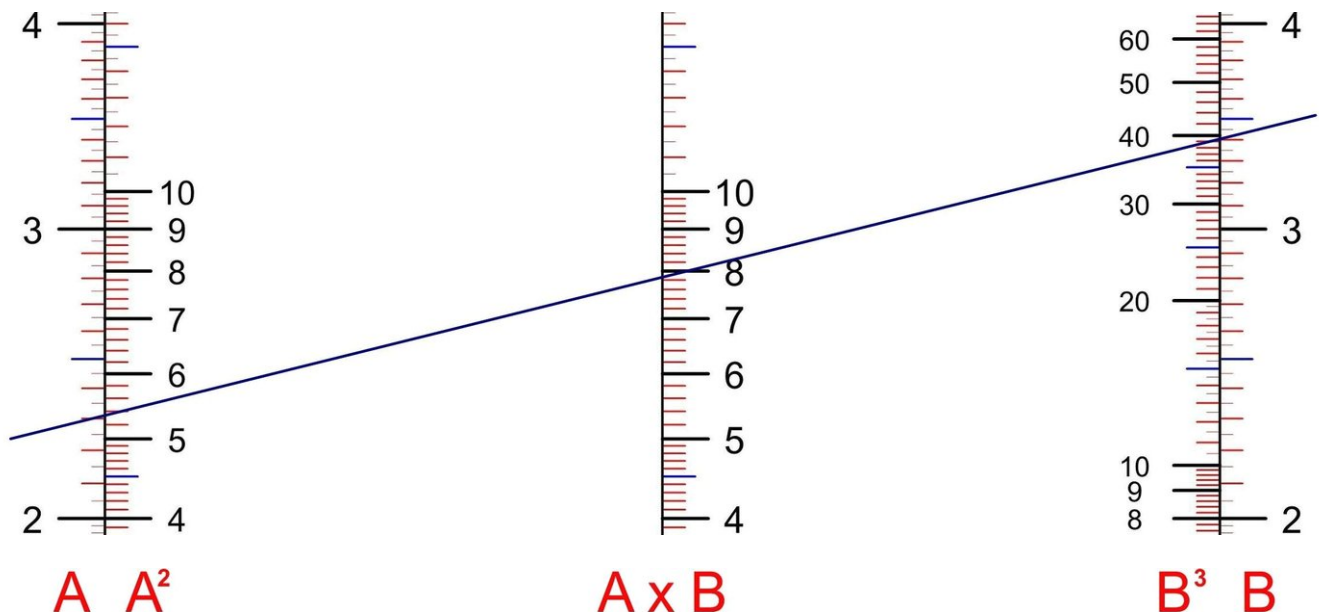


## Nomography: examples to practice

### Multiplication

Example:  $2.3 \times 3.4$

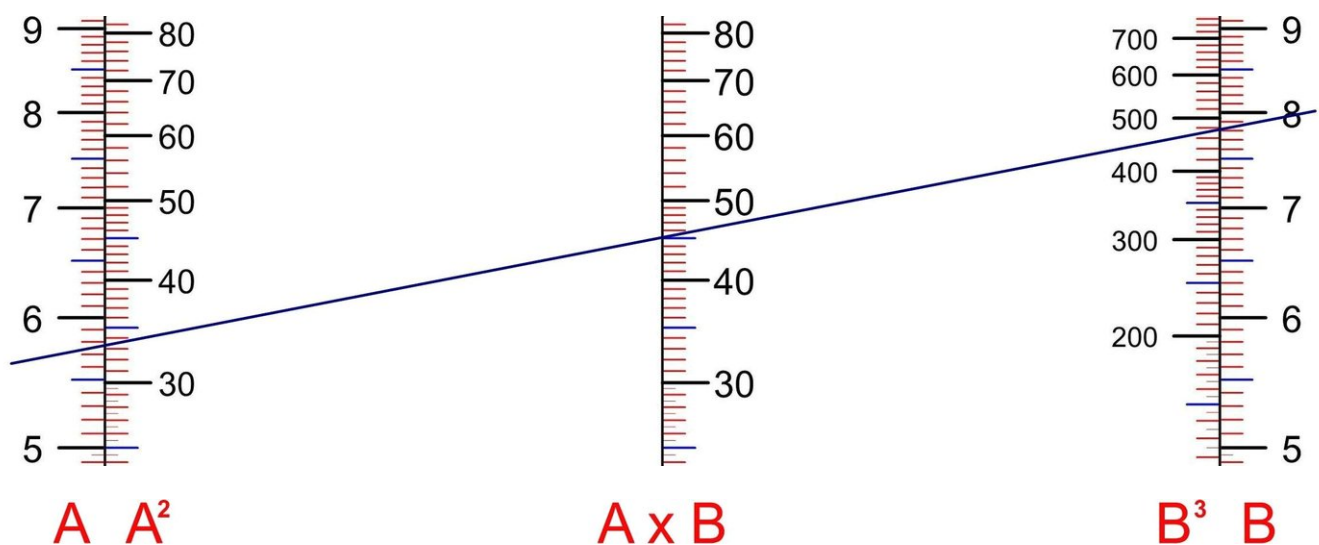
- connect with a ruler 2.3 of the **A** scale with 3.4 of the **B** scale;
- read the answer (ca. 7.81) in the **AxB** scale. The correct answer is 7.82.



### Division

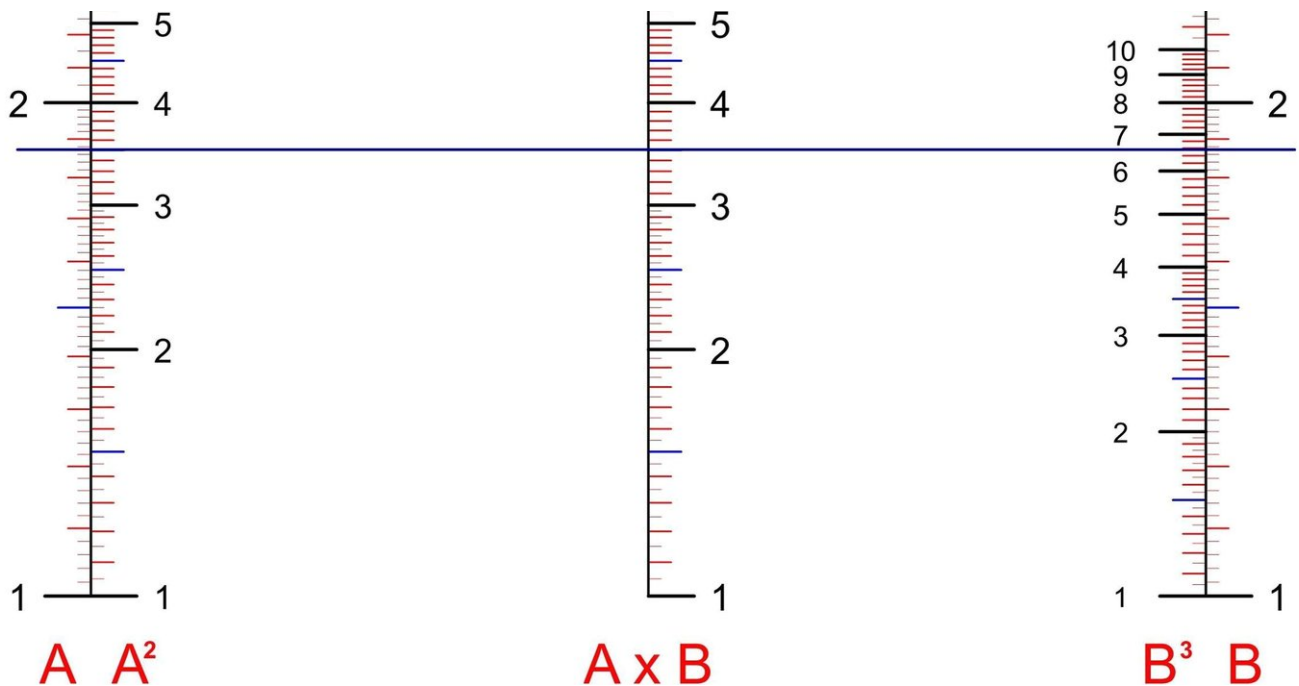
Example:  $4.5 / 7.8$

- connect with a ruler 4.5 of the **AxB** scale with 7.8 of the **B** scale;
- read the answer (ca. 5.76) on the **A** scale. We know that the result of  $4/8$  is near 0.5, so we adjust the decimal place to get 0.576. The correct answer is 0.576.

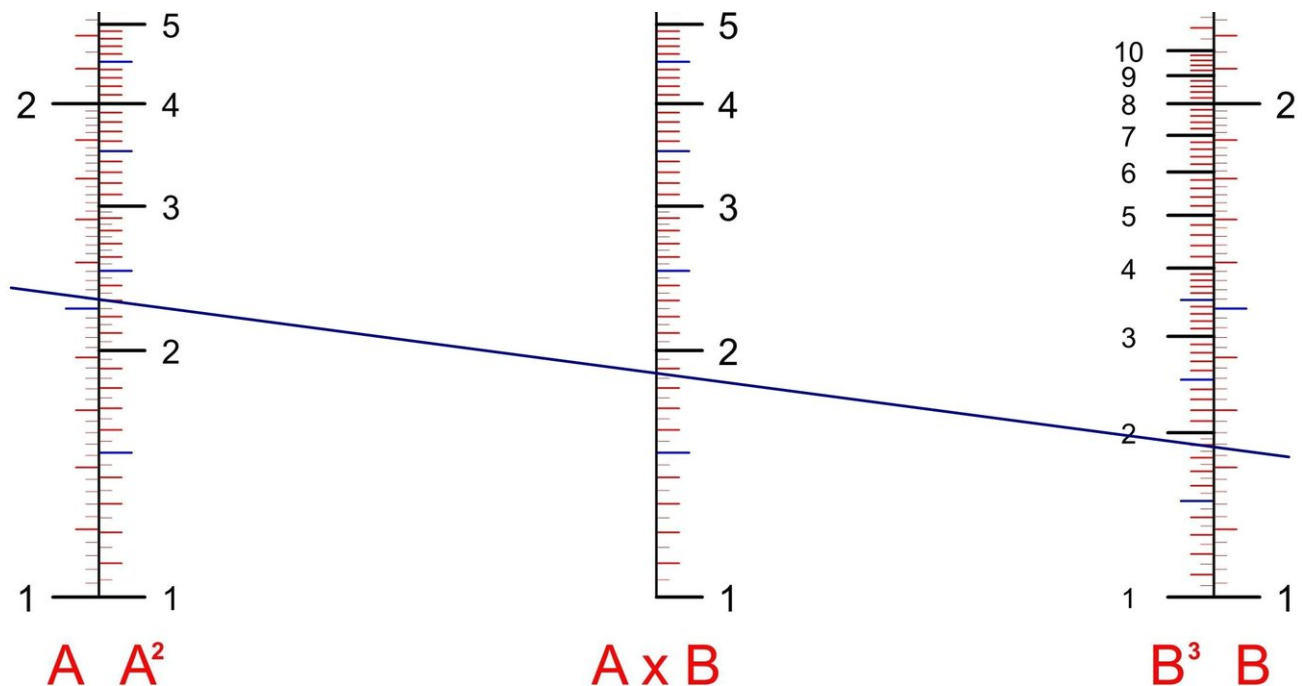


Let's do now an example of a division where the numerator is a square root:  $\frac{\sqrt{350}}{1.51}$

- to the left of 3.5 of the  $A^2$  scale we find on the  $A$  scale the square root of 350: 18.7;



- now we connect 18.7 on the  $A \times B$  scale with 1.51 of the  $A$  scale: on the  $B$  scale we can read the answer: ca. 12.39. A calculator would have been just a little more precise, finding 12.3896.



The slide rules work on the same principle, but this slight approximation has not prevented Von Braun to design space stations and send men on the moon: calculating with this system is in fact less difficult than it sounds and the secret is just to be accurate and to practice.