

EXERCISES: NATURAL NUMBER

1. Find two consecutive numbers knowing that their addition is 373.
2. The product of two consecutive numbers is 182. Find them.
3. Look for two numbers whose product is between 1500 and 1600; other two numbers whose product is between 150 and 160.
4. If we take a number of three equal digits and we divide it by the sum of the three digits, we obtain always the number 37. Why is it so?
5. In a division, the divisor is 43 and the quotient is 35. What is the smallest possible dividend? And what is the greatest one?
6. Imagine that your calculator is damaged and that product key does not work. How would you carry out the following calculations?

$$25 \times 11; 328 \times 1.001; 15 \times 92; 936 \times 75$$

7. If $84 \times 85 = 7.140$, how much is 86×85 ? Solve it without using the calculator and without doing the operation.
8. In an integer division, what is the smallest value to be added to the dividend so that the quotient increases in one unit?
9. In a sum of two terms, between which values can be the quantity we carry over vary? And in a sum of three terms? And in one of four terms? And in a subtraction? And in a multiplication?
10. In order to do a division between two multiples of 10, they have begun by suppressing the 0 in the units of both the dividend and the divisor. How does this simplification affect to the quotient? And to the remainder?
11. Estimate which ones of the following divisions have a quotient between 20 and 50. Explain the process that is followed to carry out that estimate.

$$426: 13 \quad 43368: 131 \quad 4368: 13 \quad 436: 131$$

12. Estimate the unknown value in the two following operations. Explain the process to be followed to carry out that estimate.

$$43 \times \underline{\quad} = 2408 \quad 12 \times \underline{\quad} = 672$$

13. Express with numbers and words the greatest and the smallest numbers written by using ten different digits.
14. Invent an exercise to be solved by means of the combined operation $(5 \times 6) + (12 : 3) - 8$.
15. Invent an exercise to be solved by means of the operation $15 \times 4 + 13 \times 2 - 3 \times 6$.
16. Design the wording of an exercise to be solved by means of the operation $6 : 3 + 4 \times 2 - 1$.
17.
 - a) How many tens are there in 3 hundred thousands?
 - b) How many cents are there in 2 ten thousands?
 - c) How many millions are 70 hundred thousands?
 - d) How many hundred thousands are there in a ten million?

18. They have sold 7 computers for 6.613 euros. If they had sold them for 879 euros more, then the profit would have been of 2.110 euros. How much did the 7 computers cost?
19. If I had 8.458 euros more than the quantity I have at the moment, then I could pay a debt of 77.431 euros, and I would have still 2.609 euros left. How much money do I have?
20. In order to number all the pages of a book it has been employed 408 digits. How many pages have the book?
21. Two pans contain together 126 litres of oil. If we remove 16 litres from the first one and we add 28 to the second one, then both will have the same number of litres. How much does each one contain?
22. When we have shared out 475 sweets among the students in a classroom, we have noticed that we needed 19 sweets more so that each student could receive 13 sweets. How many students were there?
23. The wine in a barrel cost 1.296 euros, and the wine left after extracting 54 litres cost 1.134 euros. How many litres were there in the barrel?
24. Ángel and Sergio have collected together 436 euros. Sergio has put 42 euros more than Ángel. How much has each one of them put?
25. Three sons received from his father an inheritance of 1600 crowns. The testament specified that the eldest son had to receive 200 crowns more than the second one, and that the second had to receive 100 crowns more than the last one. How much money did each son receive?
26. An airplane travelled 1940 km the first day, the second day travelled 340 km more than the first one, and the third day travelled 890 km less than the other two days together. How many kilometres did the airplane travel in total?
27. We would like to distribute 1200 euros among three people, so that the first one has the half than the second one, and the third person has the same amount as the other two people together. Calculate how much money corresponds to each one of them.
28. An airplane flies at an altitude of 9000 metres. It goes up 1000 metres and later it goes down twice the same number of metres. Finally, it flies 600 metres high. How many metres did it go down each time?
29. In a farm there are horses, cows and chickens. We have counted in total 714 legs, 168 horns and 137 beaks. How many horses are there in the farm?
30. A person earns 9 € each hour and he/she has worked in two different places. In his/her first job he/she worked 3 weeks, 2 days and 7 hours, and in the second one he/she worked 7 weeks, 4 days and 5 hours. Express and compute by means of combined operations the quantity of money that he/she has to earn if he/she works 5 days a week and 8 hours a day.
31. Pablo sold 160 sandwiches for 2 euros each one of them. Each sandwich is made up by 75 grams of ham, 2 slices of bread and a little bit of oil. Pablo paid 8 euros per 1kg of ham, 1 euro per each two baguettes (from each one of them he obtained 8 loaves), and he used 5 bottles of oil that cost 3 euros per bottle. How much money has he earned? Express the procedure by means of combined operations.

32. We water the garden during half an hour with a hose from which it is leaving 5 litres of water per minute. Each one of the 23 flowerpots that we have needs 3 litres of water, the flower bed needs 18 litres and each one of the 7 trees needs 5 litres. The remaining water is to water the grass. Express by means of combined operations the corresponding computations that provide the quantity of litres of water devoted to the grass.
33. A warehouse owner buys 200 apple boxes for 1000€, so that each one of them contains 20kg of apples. The transportation costs 4€ for each 100kg. He classifies the apples and packs them in bags of 5kg, but in this process there are 100 kg of defective apples that he throws away. How much should each bag cost if he wants to earn 400€?
34. A farmer has 187 hives, with a production of two harvests per year, and at a rate of 9kg of honey per hive in each harvest. The honey is packed in half a kilo jars and it is commercialized in boxes of 6 jars which are sold for 18 euros per box. There are sanitation expenses corresponding to 2 euros per hive each year, and there are also fix permanent maintenance expenses of 150 euros per harvest. What is the annual profit of the whole apiary?
35. A hardware dealer buys 4 cable reels of 200 metres long each one of them for 2€ per meter. How much should he sell the metre of cable at if he wants to earn 800€ selling all cable?
36. Each one of the squares included in the following operations represents a digit. Find out the corresponding digit for each situation.

$$\begin{array}{r} \square\square2\square\square \\ \times\square3 \\ \hline \square9\square52 \\ 2\square\square6\square \\ \hline \square0\square5\square2 \end{array}$$

$$\begin{array}{r} 25\square\square1 \overline{)1\square} \\ 1\square \\ \hline \square\square \\ 6\square \\ \hline 1 \end{array}$$

$$\begin{array}{r} \square2\square \\ \times\square8 \\ \hline 3416 \\ 8\square\square \\ \hline \square\square\square\square \end{array}$$

$$\begin{array}{r} \square\square\square \overline{)7} \\ 2\square \\ \hline 3\square \\ \hline 1 \end{array}$$