

Linear Equation Word Problems (solutions)

Number problems

- 1.- Calculate the number that added with its previous and with its next gives 114.
- 2.- Three consecutive numbers add up to 51, what are those numbers? [\[video\]](#)
- 3.- Calculate the number that triples when you add 26.
- 4.- Find a number whose triple minus 5 equals its double plus 3. [\[video\]](#)
- 5.- Find a number that added to its double gives 48.
- 6.- Twice a number increased by 12 is equal to its triple decreased by 5. What's the number?
- 7.- The sum of two consecutive odd numbers is 36. Work out those numbers.
- 8.- Find two numbers knowing that one is four times larger than the other and their sum is 25.
- 9.- If we add twice a number to its third part, we get 14. What number is it?

Money problems

- 10.- I have twice as many coins in one hand as I do in the other. If I have a total of 27 coins, how many coins do I have in each hand?
- 11.- If we add €10 to twice your money, it's the same as subtracting your money from €43. How much money do you have?
- 12.- Ana buys a hat, a dress, and a coat for €505. Calculate the respective prices, given that the dress is worth 25 times more than the hat, and the coat, three times more than the dress. [\[video\]](#)
- 13.- With the 30€ that I have got, I could go to the pool for two days and one day to the cinema... and I would still have 8€ left. Knowing that the entrance to the pool costs 2€ more than the cinema... How much does the cinema ticket cost? [\[video\]](#)
- 14.- Juan has 90€ on 5€ and 10€ banknotes. If the number of 5€ banknotes is four times the number of 10€ banknotes, how many banknotes do you have in each class?
- 15.- To organize an excursion for a group of friends, each person contributed €16. If there were three more of them, they would only contribute €12. How many friends went on the excursion?

Age problems

- 16.- How old is Rosa knowing that in 56 years she will be five times older?
- 17.- The ages of two brothers add up to 38 years. Calculate them, knowing that one is 8 years older than the other.
- 18.- A father is 47 years old, and his son is 11. How many years must pass before the father's age is three times that of the son? [\[video\]](#)
- 19.- Marcos is 15 years old, his brother Luis is 13, and his father is 43. How many years must pass before the two sons add up to the father's age? [\[video\]](#)
- 20.- Elena is 3 years younger than Darío. Darío is 1 year older than Lola. Their total age is 41. How old are they? [\[video\]](#)
- 21.- Twice my age five years ago was 80. What is my current age?
- 22.- The grandfather's age is twice that of the father. The father's age is twice that of the son. A year ago, their ages combined for 137 years. How old are they now? [\[video\]](#)

23.- A father is 20 years older than his son. In 12 years, the father will be twice as old as his child. How old are they now?

Geometric problems

24.- The perimeter of a rectangle is 8 cm. Its height is three times its base. Calculate its height. [\[video\]](#)

25.- In an isosceles triangle, the equal sides are 18 cm larger than the unequal side. We know that its perimeter measures 54 cm. How long are its sides? [\[video\]](#)

26.- If we increase the side of a square by 8 cm, its perimeter triples. How long is the side?

27.- A rectangular plot of land is 18 meters longer than it is wide, and has a 156-meter fence. What are the dimensions of the plot?

28.- In a triangle, one of the angles is twice as large as the other, and the other is equal to the third angle increased by 40° . What is the value of each angle?

29.- In an obtuse triangle, one of the angles measures 20° more than the other. The third angle is twice as large as the largest of those we have mentioned. How tall is each one? [\[video\]](#)

30.- Determine the measurements of a rectangle with a perimeter of 1800 m and whose height is two-thirds of the base.

Problems with fractions

31.- The sum of a number and its half is 48. What is that number? [\[video\]](#)

32.- A man spent $\frac{1}{5}$ of what he owned on clothes and $\frac{3}{8}$ on books if he lent €102 to a friend and ended up with nothing. How much money did he spend?

33.- Marta earns a little money by mowing the lawn for her neighbors. She saves $\frac{1}{4}$ in her piggy bank, and uses half of what she had left to pay her sister back. If, after this, she has \$15 left in her wallet, how much had she earned? [\[video\]](#)

34.- From a water tank, $\frac{2}{7}$ of its contents are extracted, then $\frac{1}{3}$ of what was left. If there is 1 hl left, what is the capacity of the tank?

35- $\frac{4}{5}$ of a drum of oil has been consumed. If 30 liters are refilled, it is half full. What is the capacity of the drum (in liters)? [\[video\]](#)

36.- A farmer brings a basket of eggs to the market, but $\frac{2}{5}$ of the eggs are broken on the way. He decides to go back to the chicken farm and collect 21 more eggs... so he now has $\frac{6}{8}$ of the initial amount. How many eggs did he have at the beginning?

37.- A bank cashier makes two payments. In the first, he gives $\frac{2}{5}$ of what he had plus \$500. In the second payment, he gives half of what's left plus \$250. In the end, the cashier has one-fifth of what he started with. Calculate what the cashier started with and the payments he made.

Other equation problems

38.- If you added 14 liters of water to a jug of water, it would have three times as much water as the water you would have if you took out two liters. How much water is in the jug? [\[video\]](#)

39.- Three pants on sale cost me 67.50. There was a 25% discount on the 2nd unit, and a 50% discount on the 3rd unit. How much did I pay for each of them? [\[video\]](#)

40.- A tree is attached to the ground by a steel cable. The anchor point is 5 meters horizontally from the base of the tree. The cable is 1 meter longer than the height at which it is attached in the tree. Calculate the length of the wire. [\[video\]](#)

Solutions:

1. 38
2. 16, 17 and 18
3. 13
4. 8
5. 16
6. 17
7. 17 and 19
8. 5 and 20
9. 6
10. 9 in one hand and 18 in the other.
11. 11 €
12. Hat 5€, dress 125€ and coat 375€
13. 6 €
14. 3 of 10 € and 12 of 5 €.
15. 9 friends
16. 14 years
17. 15 and 23 years
18. 7 years
19. 15 years
20. Elena is 12, Darío 15 and Lola is 14.
21. 45 years
22. Grandfather 80, father 40 Years, son: 20 years
23. 8 and 28 years
24. 3 cm
25. 6 cm, 24 cm and 24 cm.
26. 4 cm
27. 30 meters wide and 48 m long
28. 44° , 88° , 48°
29. 30° , 50° y 100°
30. 540 m base and 360 m high
31. 32
32. 48 € in clothes and 90 € in books
33. \$ 40
34. 210 liters
35. 100 liters
36. 140 eggs
37. \$ 5000
38. 10 liters
39. 22,5 €, 30 € and 15 €
40. 12 meters

(All my acknowledgement and thanks to the reference and help website
<https://selectividad.intergranada.com/>)

