

- **Begin with let statements defining two variables.**
 - **Write two equations with two unknowns (a linear system)**
 - **Solve the system using substitution or elimination.**
 - **Conclude.**
1. Two numbers are such that 3 times the greater exceeds twice the smaller by 62. The sum of the numbers is 84. Find the numbers. [s=38,g=46]
 2. Find two numbers so that their sum divided by 4 is 12. The first number if doubled and increased by 24, is equal to twice the other. [18,30]
 3. The sum of two integers is -20. One integer is three times the other. Find the integers. [-5,-15]
 4. Five times the larger number of two numbers, increased by four times the smaller is 271. Three times the larger number exceeds twice the smaller by 57. Find the numbers. [24,35]
 5. Find two numbers such that twice the first number equals three times the second number and the first number decreased by half the second number is 2. [2,3]
 6. Larry is 8 years older than his sister. In 3 years, he will be twice as old as she is now. How old is each now? [11,19]
 7. Barry is 8 years older than his sister. In 3 years, he will be twice as old as she will be then. How old is each now? [5,13]
 8. Jasper is 6 years older than Mia. In 4 years, he will be twice as old as Mia was 5 years ago. Find their ages now. [20,26]
 9. Zen is twice as old as Margeaux. In two years, Zen will be 4 times as old as Margeaux was 9 years ago. How old are they now? [19,38]
 10. A movie theatre sold twice as many adult tickets as student tickets. The total receipts were \$2299. If adult tickets cost \$7 and student tickets cost \$5, how many of each were sold? [a=242,s=121]
 11. Thea's hockey team bought 70 pucks costing \$100. Practice pucks cost \$1.25 each and game pucks cost \$2.50 each. How many of each kind did she buy? [p=60, g=10]
 12. Colin has \$10.15 in quarters and dimes. If the number of dimes is 8 more than three times the number of quarters, how many of each does he have? [q=17, d=59]
 13. Paul invested \$5000, part at 7% per annum and the remainder at 6% per annum. After one year, the total interest from these investments was \$315. How much was invested at 7%? [\$1500]
 14. Rhian has \$31.00 consisting of \$2 coins and \$5 bills. If he has 11 coins/bills in all, how many of each does he have? [8 \$2, 3 \$5]
 15. A grade 1 class collected \$3.55 in nickels and dimes for the Red Cross. There were 56 coins in total. How many of each coin were there? [d=15,n=41]
 16. Tony paid \$185 for a suit. He paid with \$5 bills and \$10 bills. If he used 26 bills, how many \$5 bills did he use? [T=11,F=15]
 17. A sum of \$7.40 is made up of quarters and dimes. If there are 10 more quarters than dimes, how many coins of each kind are there? [d=14, q=24]
 18. A parking lot contained 102 vehicles (cars and buses). Each car was charged \$3 and each bus \$10. The total revenue was \$418. How many buses were on the lot? [16 buses]
 19. At Burgers and Shakes Tom placed an order for 6 burgers and 4 shakes and paid \$14, Rachel ordered 5 burgers and 2 shakes and paid \$10. Sam ordered 2 burgers and a shake. How much will Sam pay for his meal? [\$4.25]
 20. Ben got \$500 from the bank and received \$5 and \$10 bills. If the teller gave him 60 bills, how many \$5 bills did he receive? [20]
 21. The AY Student's Council organized a dance. The ticket price for AY students was \$5.50 and guests was \$7.00. The total receipts were \$2175.00. If 375 students attended, how many of them were guests. [s=300, g=75]
 22. Mary invested \$2000, part at 4% interest and part at 7%. If the interest on her investments totaled \$92, how much did she invest at each rate? [\$1600, \$400]
 23. Student council had \$1200 and deposited part of it in an account receiving 9% and the rest an account receiving 4% per annum. If the total annual interest was \$88, how much money was deposited in each account? [\$400,\$800]
 24. Brian invested \$3500, part at 6% and part at 9% interest. The interest received at the higher rate was double the interest received at the lower rate. How much was involved at each rate? [\$1500, \$2000]