

EXERCISES

Translate each phrase into a variable expression.

1. Five more than n
2. n more than five
3. Five less than n
4. n less than five
5. Five is greater than n
6. n is less than five
7. Five more than twice x
8. Five less than half of a number n
9. Five times n , decreased by ten
10. Five times n increased by ten
11. Five is less than or equal to m
12. Five is greater than and equal to m
13. Twice the sum of x and y
14. The sum of twice x and y
15. Five times the sum of n and two
16. The product of five and m
17. Twice the sum of x and five
18. The sum of twice x and five
19. Five decreased by four times k
20. The difference between five and k
21. Five times the sum of x and two
22. The sum of five times x and two
23. Five times the difference of x and two
24. The difference of five times x and two
25. Two less than five times x
26. Two more than five times x
27. The sum of four times k and five
28. The product of $4k$ and five
29. The difference of four times k and five
30. The quotient of four times k and five
31. Five is greater than one-third of k
32. Five is less than or equal to half of k
33. Five plus the product of m and two
34. Five plus the quotient of m and two
35. Five more than three times n
36. Five less than three times n
37. Five increased by three times n
38. Five decreased by three times n
39. Five times the sum of n and three
40. Half the quotient of n and three

Translate each statement into a variable expression

41. There are 15 more boys than girls in a class. How many boys are there if the number of girl is g ?
42. Write four consecutive integers beginning with n .
43. Write four consecutive even integers beginning with n .
44. Write four consecutive odd integers beginning with n .
45. You paid \$200 cash and made 20 equal monthly payments. Write a variable expression to represent the total cost of the product if the amount in dollars of each of the monthly payments is x .
46. John wants to rent a car for one day. The car rental costs \$110 plus \$0.25 a mile. Write a variable expression to represent the total rental costs if the mileage is x .
47. A rectangle has width 12 and length x . Write a variable expression to represent its perimeter.
48. A rectangle has width 12 and length x . Write a variable expression to represent its area.
49. The difference between my age and your age is 35. My age is n . Write a variable expression to represent your age.
50. The cost to buy an A-Plus Notes book is \$19.50. How much will n books cost ?

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Translate each sentence into an equation.

51. A number n increased by 21 is 28.
52. 8 less than a number n is 15.
53. A number n decreased by 12 is equal to 30.
54. A number n less than 8 is 15.
55. 5 more than a number x is 25.
56. 5 times a number n is 45.
57. 5 more than twice a number x is 13.
58. A number x less than 10 is 29.
59. Twice the sum of a number n and 5 is -35 .
60. One-third of a number x is 12.
61. Six times the sum of n and two is fourteen.
62. 3 times x decreased by 4 is 8.
63. Half the quotient of x and three is ten.
64. 2 less than twice a number n is 6.
65. 12 more than 4 times a number n is twice the number n .
66. Nine times x is twice the difference between x and seven.
67. Five times the number which is two less than x is fifteen.
68. Four subtracted from one-third of the number x is three-eighths.
69. A rectangle has width 12 and length x . Its perimeter is 54. Write an equation involving x to represent its perimeter.
70. A rectangle has width 12 and length x . Its area is 180. Write an equation involving x to represent its area.
71. The sum of two consecutive integers is 31. The first integer is n . Write an equation involving n to represent the sum.
72. The sum of three consecutive even integers is 48. The first integer is n . Write an equation involving n to represent the sum.
73. The sum of three consecutive multiples of 5 is 60. The first integer is n . Write an equation involving n to represent the sum.
74. John rented a car. The car rental costs \$80 per day with no mileage fee. He paid \$240 when he returned the car. The number of days he traveled is x . Write an equation involving x to represent the total car rental charges.
75. John rented a car for one day. The car rental costs \$50 plus \$0.25 a mile. He paid \$120 when he returned the car. The mileage that he traveled is x . Write an equation involving x to represent the total rental charges.
76. In an isosceles triangle, the length of each leg exceeds the base by 4 cm . The base is x cm , and the perimeter is 92 cm . Write an equation involving x to represent the perimeter.
77. The length of a rectangle is twice its width. The perimeter is 30. The width is x . Write an equation involving x to represent the perimeter.
78. The width of a rectangle is x . Its length is $x + 6$. The perimeter is 36. Write an equation involving x to represent the perimeter.
79. John has twice as much money as Carol. Together they have \$36. If x is the amount of money that Carol has, write an equation involving x to represent the total money that they have.
80. A rope is 27 cm long. You cut it into two pieces. One piece is 8 cm longer than the other piece. If the shorter piece is x cm , write an equation involving x to represent the length of the rope.