



Writing algebraic expressions and equations

Worksheet 1

For each of the following word problems, write a relation between known and un-known numbers

1. A number y is divided by 13 and answer is 7.
2. A school buys books say ' x ', worth \$2,000 and the price of each book is \$20
3. Add two consecutive numbers, r and $r + 1$, answer is 81.
4. A worker is paid \$ P every day. He works for 6 days and gets \$72
5. A school mailed letters with 50 cents stamp each. The total money spent is \$25
6. Think of a number, say k , double it and add 5 to it. The resulting number is 55
7. A number is multiplied by 3, and then 5 is subtracted, the result is 1.
8. For a school picnic, x students pay \$30 each. Total money collected is \$1500
9. Kaylee's age is 28 years and she is p years older than her daughter whose age is 5 years
10. In a party n number of people were present. 25 people preferred vegetarian meal and v people non-vegetarian meal.
11. Mr. Matt is 35 years old and is x times as old as his son whose age is 7 years.
12. Nasrin buys 3 kg. of potatoes with rate \$ x per kg. and 2 kg. of onions with rate \$ y per kg. Total money she spends is \$18.
13. A bus conductor gives 50 cents tickets to ' p ' number of people and 72 cents tickets to ' q ' number of people. The total money collected is \$27.50.
14. The sum of three consecutive integers is 33.
15. In a conductor's purse, there are x number of 50 cents coins and y number of quarters. The total amount is \$17.50.



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Worksheet 1 key

For each of the following word problems, write a relation between known and un-known numbers

1. A number y is divided by 13 and answer is 7. $\frac{y}{13} = 7$
2. A school buys books say ' x ', worth \$ 2,000 and the price of each book is \$20 ($20 * x=2000$)
3. Add two consecutive numbers, r and $r + 1$, answer is 81. $r + r+1=81 \Rightarrow 2r+1=81$
4. A worker is paid \$ P every day. He works for 6 days and gets \$72 $6p = 72$
5. A school mailed letters with 50 cents stamp each. The total money spent is \$25
Let unknown value number of letters= n , $0.50n = 25$
6. Think of a number, say k , double it and add 5 to it. The resulting number is 55 $2k + 5 = 55$
7. A number is multiplied by 3, and then 5 is subtracted, the result is 1. $3x - 5=1$
8. For a school picnic, x students pay \$30 each. Total money collected is \$1500 $30x = 1500$
9. Kaylee's age is 28 years and she is p years older than her daughter whose age is 5 years $5+p= 28$
10. In a party n number of people were present. 25 people preferred vegetarian meal and v people non-vegetarian meal. $25 + v = n$
11. Mr. Matt is 35 years old and is x times as old as his son whose age is 7 years. $7x=35$
12. Nasrin buys 3 kg. of potatoes with rate \$ x per kg. and 2 kg. of onions with rate \$ y per kg. Total money she spends is \$18. $3x + 2y = 18$
13. A bus conductor gives 50 cents tickets to ' p ' number of people and 72 cents tickets to ' q ' number of people. The total money collected is \$27.50. $50p + 72q= 2750$ or $0.50p + 0.75q = 27.50$
14. The sum of three consecutive integers is 33. Let x be first number. x , $x+1$ and $x+2$ are consecutive integers. $x+x+1+x+2=33$
or simplify $3x+3=33$
15. In a conductor's purse, there are x number of 50 cents coins and y number of quarters. The total amount is \$ 17.50. $50x + 25y = 1750$