

Name:

Date:

Hour:

Algebra 1
Application Problems

Write and solve an algebraic equation for each of these problems.

1. Alex belongs to a music club. He pays \$19.95 for a student discount card which allows him to buy CDs for \$3.95 each. After one year, Alex has spent \$63.40. How many CDs did Alex buy?
2. A certain painting company charges \$250 base plus \$16 per hour. Another painting company charges \$210 base plus \$18 per hour. How long is a job for which the two companies will charge the same amount?
3. The sum of the measures of two angles is 180° . One angle measures $3x$ and the other angle measures $2x - 25$. Find the value of x .
4. Aaron needs to take out a loan to purchase a motorcycle. At one bank, he would pay \$2500 initially and then \$150 each month for the loan. At another bank, he would pay \$3000 initially and \$125 each month. After how many months will the two loan payments be the same?
5. A taxicab company charges \$2.10 plus \$0.80 per mile. Carmen paid a fare of \$11.70. Write and solve an equation to find the number of miles she traveled.



Puzzle Time

What Is The Best Way To Communicate With A Fish?

Write the letter of each answer in the box containing the exercise number.

Find the value of the variable which satisfies the equation.

1. $14 - 3x = 4x$
2. $6a - 10 = 3a + 17$
3. $9 + 5w - 14w = 12 - 6w$
4. $12(b + 2) = 8(b + 5)$
5. $6(y + 8) = 3(2y - 7)$
6. $\frac{3}{4}(12c - 4) = 15c + 15$
7. $11(4p + 4) - 4p = 4(7p - 7)$
8. $3(2d - 8) = 11d - 18(d - 3)$
9. $5(4 + r) = \frac{1}{2}(40 + 10r)$
10. $\frac{3}{5}e - 6 = -\frac{2}{5}(e - 10) - 7$

11. Three consecutive integers are n , $n + 1$, and $n + 2$. Four times the sum of the least and greatest integers is 12 less than three times the least integer. What is the least integer?

Answers

- P. 4
- L. 3
- E. 9
- I. 6
- N. no solution
- A. 2
- D. infinitely many solutions
- T. -6
- R. -4
- I. -1
- O. -3

9	11	6	4		3	7		1		10	8	5	2
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