

READ ALL DIRECTIONS CAREFULLY!

USE ALGEBRAIC EQUATIONS!!

SHOW YOUR STEPS!!!

GOOD LUCK!!!!

For each word problem, use the given variable to write an algebraic equation. Solve the algebraic equation showing proper steps. Label answers.

1. You and four friends go to Johnny Rockets. You all split the bill equally. Each person's share was \$6.50. How much was the original bill? Let a represent the amount of the original bill.
2. At Costco, 32 cans of Coke cost a total of \$8.96. What is the cost per can? Let c represent the cost for one can of Coke.
3. Bob Loblaw is on a diet to lose weight. After losing 26 pounds, Bob weighs 231 pounds. What was Bob Loblaw's weight before his diet? Let w represent Bob's original weight.
4. Bob Loblaw is on a diet to gain weight. After gaining 26 pounds, Bob weighs 231 pounds. What was Bob Loblaw's weight before his diet? Let w represent Bob's original weight.
5. Each month, you are given an allowance of \$150. Each day you spend \$8. How many days will it take for you to have \$54 remaining? Let d represent the number of days.
6. For the holidays, you go to Things Remembered and buy a picture frame to be engraved. The frame costs \$19.95. Each letter engraved costs \$0.60. How many letters were engraved if the total cost was \$27.75? Let e represent engraved letters.

7. You and two friends shared a pizza. You also got a Coke for \$1.75. You paid a total of \$8.40. What was the cost of the pizza? Let p represent the cost of the pizza.
8. Steve is on a weight loss program. His goal weight is 195 pounds. He currently weighs 339 pounds and plans to lose three pounds each week. How long will it take him to reach his goal? Let w represent the number of weeks.
9. A 355mL can of Coke is leaking 5 mL per minute. How long will it take for the can to have 100 mL remaining? Let m represent the number of minutes.
10. To mail a first class letter, the cost is \$0.39 for the first ounce and \$0.24 for each additional ounce. If the cost to mail a letter was \$3.03, how many ounces was it? Let a represent the additional ounces.
11. A hot cup of coffee is 180°F. It loses heat at a rate of 4°F per minute. How long will it take for the coffee to be 70°F? Let m represent the number of minutes.
12. Tim is choosing between two cell phone plans that offer the same amount of free minutes. Cingular's plan charges \$39.99 with additional minutes costing \$0.45. Verizon's plan costs \$44.99 with additional minutes at \$0.40. How many additional minutes, a , will it take for the two plans to cost the same?

13. A family has two options for a child's birthday party: Adventure Plex or Bright Child. At Adventure Plex, there is a flat fee of \$300. Each child costs \$12. At Bright Child, there is a \$180 flat fee. Each child costs \$15. How many kids will it take for the costs to be the same? Let k represent the number of kids.

14. A family is choosing a birthday party location. At Bright Child, there is a \$180 flat fee. Each child costs \$15. At Chuck E. Cheese, the party has no flat fee, but each child costs \$18. How many kids must attend for the parties to cost the same? Let k represent the number of kids.

15. The Comic Book Guy weighs 435 pounds and is on a diet to lose five pounds each week. Professor Frink weighs 123 pounds and is on a diet to gain three pounds each week. How many weeks will it take for their weights to be the same? Let w represent weeks.

16. Homer Simpson weighs 400 pounds. He is on a diet to lose 5 pounds each week. Barney Gumble weighs 322 pounds. He is on a diet to lose 3 pounds each week. How many weeks will it take for their weights to be the same? Let w represent weeks.

EXTRA CREDIT: A swimming pool is being filled at a rate of 2 gallons per minute. The pool has a leak and is losing water at a rate of 0.5 gallons per minute. If the pool starts with 500 gallons, how long will it take for it to reach 750 gallons? Let m represent the number of minutes.