

## Real-World Algebra Assignment #2

1. Sierra Custom Plumbing charges \$70 for a service call, plus an hourly rate of \$20.

a. What would Sierra Custom Plumbing charge for a job that takes three and one-half hours?

b. Write an **algebraic expression** for the cost of a plumbing job that takes  $h$  hours.

c. Write an **equation** for a plumbing job that takes  $h$  hours and costs \$425, then solve for the number of hours worked.

d. You have a **major** plumbing problem in your house. You look in your checking account and find that you only have \$581. Write an **equation**, then solve for the number of hours you could have the plumber work.

2. ATT charges \$7.43 for the monthly fee plus 7 cents per minute. (reminder, 7 cents = \$0.07)

a. What would be the phone bill be if you called 100 minutes?

b. What would be the phone bill be if you called 263 minutes?

c. Write an algebraic expression for the cost of  $m$  minutes of calls?

d. Write an **equation** for a month with  $m$  minutes of phone calls that costs \$36, then solve for the number of minutes called.

Solve for the variable

3.  $3n + 2 = -1$

4.  $8y - 10 = 2$

5.  $4(3 + 5w) = -11$

6.  $-7(h + 2) = 12$

7.  $7 = x + 4(2 + x)$

8.  $20 + 3(x + 5) = 3$

9.  $120 - 8(4 + 9x) = 7$

10.  $\frac{2}{3}n + 16 = 2$