You earn $7.50 per hour at a restaurant. Last week your paycheck was for $262.50 before taxes were taken out. Write and solve an equation to find out the number of hours you worked.

Variables

$h = \#\ hrs$

EQ:

$$\frac{7.50h}{7.50} = \frac{262.50}{7.50}$$

$$h = 35\ hrs$$

A plumber charges $75 to come to your house and $35 an hour for repairs. If the plumber charged you $355 write and solve an equation to find the number of hours the they must have worked on your repairs.

EQ:

$$75 + 35h = 355$$

$$-75 \qquad\qquad -75$$

$$\frac{35h}{35} = \frac{280}{35} \qquad h = 8\ hrs$$

$h = \#\ hrs$

2-step equation

Solve this equation and do a Boolean check on your answer.

$$T.J. \cdot \frac{x - 5.4}{7.1} = 3(7.1)$$

$$x - 5.4 = 21.3$$

$$+5.4 \qquad +5.4$$

$$x = 26.7$$

Boolean Check:
1. Enter the answer you are testing
2. Press STO➡
3. Press X,T,θ,n to get X
4. Press ENTER (every time you use X it will use this number)
5. Enter the left side of the equation
6. Press 2nd
7. Press MATH
8. Press ENTER (this will give you an = sign)
9. Enter right of the equation
10. Press ENTER
If the result is a 1 then the number you tested IS a solution.
If you get a 0 then it is NOT a solution.

Multi-step equations

Solve this equation and do a Boolean check on your answer.

$$7 + 2(3x + 2) - 3x = 24$$

$$7 + 6x + 4 - 3x = 24$$

$$3x + 11 = 24$$
$$ -11 \quad -11$$

$$\frac{3x}{3} = \frac{13}{3}$$

$$x = \frac{13}{3}$$