```python
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# and open the template in the editor.

__author__ = "MargaretKing"
__date__ = "$Oct 23, 2017 1:30:34 PM$"

if __name__ == "__main__":


  ##r1 = rate car 1 is travelling (input)
  ##r2 = rate car 2 is travelling (input)
  ##ti2 = time difference b/w car 1 & 2 (input)
  ##origTime = time (in military) that car 1 left

  r1=input("Enter rate of car 1: ")
  type(r1)
  r2=input("Enter rate of car 2: ")
  type(r2)
  ti2=input("Enter the initial time of car 2 (time difference b/w car 1 & 2): ")
  type(ti2)
  origTime=raw_input("Enter the time car 2 left in military time: ")
  type(origTime)

  equation = "%dtf = %d(tf - %d)" % (r1, r2, ti2)
  print "%s" % (equation)

  ## STEP 2 - DISTRIBUTE
  ## c = constant - r2*t2i - done in distribution
  ## NOTE: multiply by -1 so c is rep. as a negative by computer
  c = r2 * ti2 * -1

  ##print new equation
  equation = "%dtf = %dtf  %d" % (r1, r2, c)
  print "%s" % (equation)
  ##print "c: %d" % (c)

  ## STEP 3 - MOVE LIKE VARIABLES TO SAME SIDE OF EQUATION
  ## NOTE: no arithmetic is done in computer - representation for user
  ## print new equation
  equation = "%dtf - %dtf = %d" % (r1, r2, c)
  print "%s" % (equation)

  ## STEP 4 - COMBINE LIKE TERMS
  ## create a new variable to store the coefficient (r1-r2)

  m = r1 - r2
  ## print new equation
  equation = "%dtf = %d" % (m, c)
  print "%s" % (equation)

  ## STEP 5 - SOLVE FOR tf
  ## divide the coefficient of tf by the constant on R.H.S. of equation
  tf = c/m

  ##print the value of tf
```
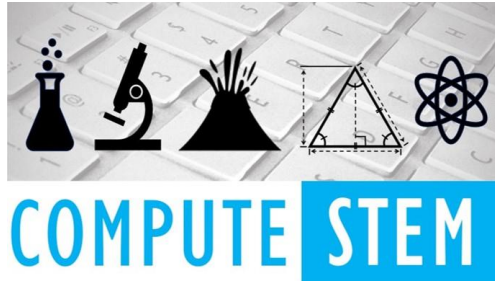
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```
print "tf: %d" % (tf)

## STEP 6 - FIND TIME THE CARS MEET
## NOTE: tf is the time it takes for the cars to meet
## it must be added to the time car 2 left to find the actual time

## Add tf (hours) to number before the colon in time entered
## you must extract the number before the colon as an integer first

hour = int(str.isdigit(origTime[0]))

if (str.isdigit(origTime[1])):
    hour = (hour) * 10 + int(origTime[1])
meetTime = hour + tf

print "The cars will meet at %d:00" % meetTime
```

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