

3. A firm creates projects for which a certain number of hours are needed. The firm has a certain number of days. During 10% of the days, the workers are being trained and cannot work on the project. A normal working day is 8 hours long. The project is important for the firm and every worker must work on it with overtime of 2 hours per day. The hours must be rounded down to the nearest integer (for example, 6.98 hours are rounded to 6 hours). Write a program that calculates whether the firm can finish the project on time and how many hours more are needed or left.

```
#include <stdio.h>

#include <math.h>

int main() {

    int totalDays, trainingDays;

    float hoursNeeded, totalHoursAvailable, hoursPerDay, overtimePerDay;

    // Input the total number of days, training days, and hours needed for the project
    printf("Enter the total number of days: ");
    scanf("%d", &totalDays);
    printf("Enter the number of training days: ");
    scanf("%d", &trainingDays);
    printf("Enter the total hours needed for the project: ");
    scanf("%f", &hoursNeeded);

    // Calculate the total available hours for the project
    totalHoursAvailable = (totalDays - 0.1 * totalDays - trainingDays) * 8;

    // Calculate the total overtime hours needed
    overtimePerDay = 2;
    hoursPerDay = 8 + overtimePerDay;

    // Calculate the total overtime hours for the project
    float totalOvertimeHours = totalDays * overtimePerDay;

    // Calculate the total available hours with overtime
    totalHoursAvailable += totalOvertimeHours;

    // Calculate the hours left or needed
    float hoursLeftOrNeeded = hoursNeeded - totalHoursAvailable;

    // Check if the project can be finished on time
```

```
if (hoursLeftOrNeeded <= 0) {  
    printf("The project can be finished on time. Hours left: %.0f\n", fabs(hoursLeftOrNeeded));  
} else {  
    printf("The project cannot be finished on time. Hours needed: %.0f\n",  
        ceil(hoursLeftOrNeeded));  
}  
return 0;  
}
```

Output:

Enter the total number of days: 2

Enter the number of training days: 3

Enter the total hours needed for the project: 2

The project cannot be finished on time. Hours needed:8