

Problem 1: Box Office

A movie theater only keeps a percentage of the revenue earned from ticket sales. The remainder goes to the movie distributor. Write a program that calculates a theater's gross and net box office profit for a night, and the amount paid to the movie distributor. The program should ask for the name of the movie, and how many adult and child tickets were sold. Assume the price of an adult ticket is \$6.00, a child's ticket is \$3.00, and the theater keeps 20 percent of the gross box office profit. After calculating the results, the program should display a report similar to the following in **format** and **alignment**:

Sample Run:

```
Enter the name of the movie: Wheels of Fury
Enter # of adult tickets sold: 382
Enter # of child tickets sold: 127
```

```
Movie Name:                "Wheels of Fury"
Adult Tickets Sold:        382
Child Tickets Sold:        127
Gross Box Office Profit:   $ 2673.00
Net Box Office Profit:     $  534.60
Amount Paid to Distributor: $ 2138.40
```

(Please run the program with your own input data.)

Problem 2: Interest Earned

Assuming there are no deposits other than the original investment, the balance in a savings account after one year may be calculated as

$$\mathit{Amount} = \mathit{Principal} * \left(1 + \frac{\mathit{Rate}}{\mathit{T}} \right)^{\mathit{T}}$$

where **Principal** is the balance in the savings account, **Rate** is the interest rate, and **T** is the number of times the interest is compounded during a year (T is 4 if the interest is compounded quarterly).

Write a program that asks for the principal, the interest rate, and the number of times the interest is compounded. After finishing the calculation, the program should display a report similar to the following in **format** and **alignment**:

Sample Run:

```
Enter the principal: 1000
Enter the interest rate: 4.25
Enter # of times interest is compounded: 12

Interest Rate:           4.25%
Times Compounded:       12
Principal:               $ 1000.00
Interest:                $   43.34
Amount in Saving:       $ 1043.34
```

(Please run the program with your own input data.)