3 # BOUNDARY VALUES

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An array of houses from an average midwestern community is depicted below. The interesting feature about this town is that the single worker who lives in each house has an hourly wage that is equal to the average hourly wage of the 8 workers who live adjacent to that house.

| | | | |
|---|---|---|---|
| $10 | $12 | $14 | $16 |
| $12 | ? | ? | $9 |
| $14 | ? | ? | $7 |
| $16 | $9 | $7 | $3 |

We are given the wage rates for the workers living on the outer edge of a small section of this neighborhood. Write a program to determine the wage rate of the workers living in the 4 interior houses.

HINT: Initially assume that the interior wage rates are zero then compute the average of the 8 houses surrounding each interior house. Assign this new value to the wage at the interior house. Repeat this averaging computation until the change between successive calculations is very small (i.e. less than $.01).

```
FOR X = 1 TO 10
    C(X) = (A(X) + B(X)) ^ 2
NEXT X
```