

Joe would like to build several bookcases that are different heights and widths. All will be 12 inches in depth. The bookcases will have three shelves, in addition to the bottom and the top. Write a solution to print the number of feet of 12-inch-wide boards that will Joe need to complete a bookcase, given the height and width.

Bookcase depth: 12 inches

Shelves: 3 + top + bottom = 5 horizontal boards

Vertical sides: 2 vertical boards

Input: height and width of the bookcase

Goal: Calculate total feet of 12-inch-wide boards needed

Start

```
Input height // in inches
```

```
Input width  // in inches
```

```
shelves = 5  // top, bottom, and 3 shelves
```

```
verticalsides = 2
```

```
// Calculate total board length needed in inches
```

```
totalboardleninch = (shelves*width) + (verticalsides*height)
```

```
// Convert inches to feet (12 inches = 1 foot)
```

```
totalboardlenfeet = totalboardleninch / 12
```

```
Output "Total board length (in feet):", totalboardlenfeet
```

End

Example: height = 72 inches, width = 36 inches

```
totalboardleninch= (5 * 36) + (2 * 72)
```

```
                = 180 + 144=324 inches
```

```
totalboardlenfeet= 324 / 12 = 27 feet
```