

# THE TEACHERS' ASCIIDOCTOR STARTER KIT

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## LET'S TEST SOME GO

Every test is written in a file whose name ends with `_test.go`

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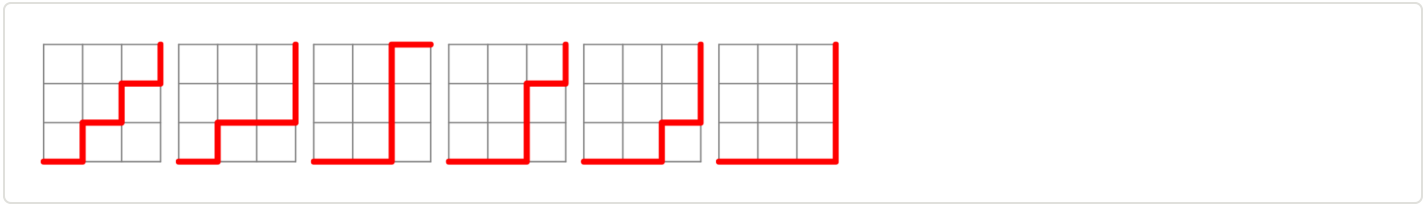
```
func Test_walks(t *testing.T) { ❶
    result := walks(4,4)
    if result != 20 {
        t.Error("incorrect result: expected 20, got", result) ❷
    }
}
```

- ❶ Requires the *testing* package
- ❷ Error call

The section below has an example of some walks.

## STAIRCASE WALKS

Six of the 20 possible walks for a 4 × 4 grid



## THE RELATIONSHIP

The number of staircase walks on a grid with  $m$  horizontal lines and  $n$  vertical lines is given by

$$\binom{m+n}{n} = \frac{(m+n)!}{m!n!}$$

**YOUR TURN: PROVE THE FORMULA ABOVE**

**PROOF**

- This is a proof of the formula above.
- It does not show in the "handout" version of this document.

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**DRAW YOUR OWN WALK!**

