

# Test Support

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# 1 Using Check Forms

```
(require test-engine/racket-tests)    package: htdp-lib
```

This module provides test forms for use in Racket programs, as well as parameters to configure the behavior of test reports.

Each check form may only occur at the top-level; results are collected and reported by the test function. Note that the check forms only register checks to be performed. The checks are actually run by the `test` function.

```
(check-expect (test any/c) (expected any/c))
```

Checks whether the value of the `test` expression is structurally equal to the value produced by the `expected` expression.

It is an error for `test` or `expected` to produce a function value or an inexact number.

```
(check-within (test any/c) (expected any/c) (delta number?))
```

Checks whether the value of the `test` expression is structurally equal to the value produced by the `expected` expression; every number in the first expression must be within `delta` of the corresponding number in the second expression.

It is an error for `test` or `expected` to produce a function value.

```
(check-error (test any/c))  
(check-error (test any/c) (msg string?))
```

Checks that evaluating `test` signals an error, where the error message matches the string (if any).

```
(check-member-of (test any/c) (expected any/c) ...)
```

Checks whether the value of the `test` expression is structurally equal to any of the values produced by the `expected` expressions.

It is an error for `test` or any of the `expected` expression to produce a function value or an inexact number.

```
(check-range (test number/c) (min number/c) (max number/c))
```

Checks whether value of `test` is between the values of the `min` and `max` expressions [inclusive].

```
(test) → void?
```

Runs all of the tests specified by check forms in the current module and reports the results. When using the gui module, the results are provided in a separate window, otherwise the results are printed to the current output port.

```
(test-format) → (any/c . -> . string?)  
(test-format format) → void?  
  format : (any/c . -> . string?)
```

A parameter that stores the formatting function for the values tested by the check forms.

```
(test-silence) → boolean?  
(test-silence silence?) → void?  
  silence? : any/c
```

A parameter that stores a boolean, defaults to #f, that can be used to suppress the printed summary from test.

```
(test-execute) → boolean?  
(test-execute execute?) → void?  
  execute? : any/c
```

A parameter that stores a boolean, defaults to #t, that can be used to suppress evaluation of test expressions.

## 2 GUI Interface

```
(require test-engine/racket-gui)    package: htdp-lib
```

This module requires GRacket and produces an independent window when displaying test results. It provides the same bindings as `test-engine/racket-tests`.

### **3 Integrating languages with Test Engine**

*(To be written.)*