

Course > 1a: Reginning Student Language > Function Definitions > Questions 1-3

Question 1

1 point possible (graded)
Why should you use function definitions?

To be lazy

To make the code easier to read

To avoid duplicated code

All of the above ✓

Explanation
All of these are good reasons because we would like to avoid redundancy and duplicate code as programs get big, mainly so we can easily understand and navigate the code.

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Question 2

1 point possible (graded)

Suppose we want a function that will give the length of the hypotenuse of any right angle triangle. Which of the following would achieve that?

Remember that the expression we used when the side lengths were 3 and 4 was:

(sqrt (+ (sqr 3) (sqr 4)))

```
(define (pythag 3 4)
(sqrt (+ (sqr 3) (sqr 4))))
```

```
(sqrt (+ (sqr a) (sqr b)))
```

```
(define c (sqrt (+ (sqr a) (sqr b))))
```

```
(define (pythag a b)
    (sqrt (+ (sqr a) (sqr b))))
✓
```

Explanation

The side lengths of the right angle triangle can vary, so we can write the following function:

```
(define (pythag a b) (sqrt (+ (sqr a) (sqr b))))
```

Where parameters \boldsymbol{a} and \boldsymbol{b} stand for the changing values.

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• Answers are displayed within the problem

Question 3

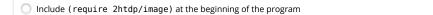
1 point possible (graded)

What should we do to fix the following error:

```
(define (bar img)
  (* (image-width i) 2))
```

Welcome to <u>DrRacket</u>, version 5.3.1 [3m]. Language: Intermediate Student; memory limit: 128 MB. i: this variable is not defined

Define i in the program





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 ${\bf 0} \quad \hbox{Answers are displayed within the problem}$