

## 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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❗ Answers are displayed within the problem

## 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 a and b stand for the changing values.


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## Question 3

1 point possible (graded)

What should we do to fix the following error:

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

Welcome to [DrRacket](#), version 5.3.1 [3m].  
Language: [Intermediate Student](#); memory limit: 128 MB.  
*i: this variable is not defined*



Define `i` in the program



Include `(require 2http/image)` at the beginning of the program



Replace `i` with `img`, which is the name of the parameter for this function ✓

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