

Started on Thursday, 20 October 2022, 10:50 AM
State Finished
Completed on Thursday, 20 October 2022, 11:00 AM
Time taken 10 mins
Grade 8.60 out of 10.00 (86%)

Question 1

Partially correct

Mark 5.60 out of 7.00

Match the following expressions with their types.

| | |
|---|-------------------------------|
| map return | [a -> IO a] ✓ |
| do x <- return getLine y <- x putStrLn y | IO () ✓ |
| return return | IO (a -> IO a) ✓ |
| do map putStrLn ["Hello", "world"] getLine | TYPE ERROR ✓ |
| do x <- getLine return (length x) | IO Int ✓ |
| return map | IO ((a -> b) -> [a] -> [b]) ✓ |
| do putStrLn "Hello, world!" getLine | IO String ✓ |
| map putStrLn ["Hello", "world"] | [IO ()] ✓ |
| do x <- return getLine return x | IO Int ✗ |
| do x <- return putStrLn return x | IO String ✗ |

Your answer is partially correct.

You have correctly selected 8.

The correct answer is:

| |
|---|
| map return |
| → [a -> IO a], |
| do x <- return getLine y <- x putStrLn y |
| → IO (), |
| return return |
| → IO (a -> IO a), |
| do map putStrLn ["Hello", "world"] getLine |
| → TYPE ERROR, |
| do x <- getLine return (length x) |
| → IO Int, |
| return map |
| → IO ((a -> b) -> [a] -> [b]), |

```
do
  putStrLn "Hello, world!"
  getLine
```

→ IO String,

```
map putStrLn ["Hello", "world"]
```

→ [IO ()],

```
do
  x <- return getLine
  return x
```

→ IO (IO String),

```
do
  x <- return putStrLn
  return x
```

→ IO (String -> IO ())

Question 2

Correct

Mark 3.00 out of 3.00

How many times does the following program print "hello"?

```
main :: IO ()
main = do
  putStrLn "hello"
  x <- putStrLn "hello"
  y <- return (putStrLn "hello")
  z <- return (return main)
  return x
  return y
  y
  z
  return ()
```

Answer: 3



The correct answer is: 3