

Quizlet

chapter 5 part2

52 terms | muk

51) What step should you take after implementing a method?

- a) Write the pseudocode.
- b) Determine the parameter variables.
- c) Test the method in isolation.
- d) Define the scope of the method

c) Test the method in isolation.



52) What is the problem with the definition of the following method that calculates and returns the tax due on a purchase amount?

```
public static double  
taxDue(double amount, double  
taxRate)  
{  
    double taxDue = 0.0;  
    taxDue = amount * taxRate;  
}
```

- a) The taxDue method should not be static.
- b) The data type of the parameter variables is incorrect.
- c) The taxDue calculation is incorrect.
- d) The taxDue method does not return a value.

d) The taxDue method does not return a value.



53) You need to write a method



that calculates the shipping cost for an appliance, which depends on the item's 3D dimensions and weight. What should be the inputs and their data types for this method?

- a) double size, double weight
- b) double size, double weight, double price
- c) double size, double weight, double shippingCost
- d) double width, double height, double depth, double weight

d) double width, double height, double depth, double weight

54) Given the following code, which argument(s) will cause the method to return true?

```
public static boolean
isIdeal(String s)
{
int low = 0;
int high = s.length() - 1;

while (low < high)
{
if (s.charAt(low) != s.charAt(high))
{
return false;
}
low++;
high--;
}
return true;
}
```

I. isIdeal("civic")

d) I, II, and IV



II. isIdeal("level")
III. isIdeal("race car")
IV. isIdeal("rotor")

- a) I only
- b) I and II only
- c) I, II, and III
- d) I, II, and IV

55) Given the following code, which method call(s) will cause the method to return true?

```
public static boolean isIdeal(int year)
{
    return ((year % 4 == 0) && (year % 100 != 0)) || (year % 400 == 0);
}
```

I. isIdeal(1600)
II. isIdeal(1700)
III. isIdeal(2000)
IV. isIdeal(2008)

- a) I only
- b) I and II only
- c) I, II, and III
- d) I, III, and IV

d) I, III, and IV



56) What is wrong with the following code?

```
public static double div2(int n1, int n2)
{
    if (n2 != 0)
    {
```

c) No return statement for all possible logic paths



```
return (double) n1 / n2;  
}  
}
```

- a) Compilation error
- b) Invalid parameter variable types
- c) No return statement for all possible logic paths
- d) Invalid return type

57) What is wrong with the following code?

```
public static char grade(int  
score)  
{  
if (score >= 9)  
{  
return 'A';  
}  
else if (score >= 8)  
{  
return 'B';  
}  
else if (score >= 6)  
{  
return 'C';  
}  
else if (score >= 4)  
{  
return 'D';  
}  
}
```

- a) Compilation error
- b) Invalid parameter variable types

c) No return statement for all possible logic paths



- c) No return statement for all possible logic paths
- d) Invalid return type

58) What is wrong with the following code?

```
public static String grade(int score)
{
if (score >= 9)
{
return A;
}
else if (score >= 8)
{
return B;
}
else if (score >= 6)
{
return C;
}
else if (score >= 4)
{
return D;
}
return F;
}
```

- a) Illegal method name
- b) Invalid parameter variable type
- c) No return statement for all branches of "if" statement
- d) Invalid argument in return statements

c) No return statement for all branches of "if" statement



59) What is wrong with the



following code?

```
public static int count(String s)
{
for (int i = 0; i < s.length(); i++)
{
int cnt = 0;
if (Character.isDigit(s.charAt(i)))
{
cnt++;
}
}
return cnt;
}
```

- a) Illegal return type
- b) Invalid parameter variable type
- c) No return statement
- d) Invalid scope of variable used in return statement

d) Invalid scope of variable used in return statement

60) Given the following code, what is the output?

```
public static String magic(String s)
{
String r = "";
boolean got = false;
for (int i = 0; i < s.length(); i++)
{
if (Character.isDigit(s.charAt(i)))
{
r = r + s.charAt(i);
got = true;
}
else if (got)
```

d) 45



```
{  
return r;  
}  
}  
return r;  
}  
public static void main(String[]  
args)  
{  
System.out.println(magic("ABCd  
45&*31"));  
}
```

- a) ABCd
- b) 4531
- c) 45&*
- d) 45

61) Given the following code,
what is the output?

```
public class MysteriousClass  
{  
public static void main(String[]  
args)  
{  
int i = 20;  
int b = m2(i);  
System.out.println(b + i);  
}
```

```
public static int m1(int i)  
{  
int n = 0;  
while (n * n <= i)  
{  
n++;  
}
```

c) 70



```
return n - 1;
}

public static int m2(int a)
{
int b = 0;
for (int n = 0; n < a; n++)
{
int i = m1(n);
b = b + i;
}
return b;
}
}
```

- a) 50
- b) 60
- c) 70
- d) 80

62) Which of the following is the best choice for a return type from a method that prompts users to enter their credit card number exactly as it appears on the card?

- a) boolean
- b) int
- c) String
- d) long

c) String



63) What is incorrect in the following code snippet?

```
public static void
textInRectangle(String str)
{
```

d) textInRectangle does not return a value; therefore, it cannot be used with System.out.println




```

System.out.println("-----");
System.out.println("|" + str + "|");
System.out.println("-----");
}
public static void main(String[]
args)
{
System.out.println(textInRectang
le("Hello there"));
}

```

- a) textInRectangle is called with incorrect arguments.
- b) textInRectangle should be called in an assignment statement.
- c) The return value from textInRectangle is never used.
- d) textInRectangle does not return a value; therefore, it cannot be used with System.out.println

64) Which of the following code snippets can be used for defining a method that does not return a value? The method should accept a string and then display the string followed by "Just Let's learn Java!" on a separate line.

a)

```

public static String
showString(String someString)
{
System.out.println(someString);
System.out.println("Just Let's

```

b)

```

public static void showString(String someString)
{
System.out.println(someString);
System.out.println("Just Let's learn Java!");
}

```



```
learn Java!");
}
b)
public static void
showString(String someString)
{
System.out.println(someString);
System.out.println("Just Let's
learn Java!");
}
c)
public static void
showString(String someString)
{
System.out.println(someString);
System.out.println("Just Let's
learn Java!");
return someString;
}
d)
public static void showString()
{
System.out.println(someString);
System.out.println("Just Let's
learn Java!");
}
```

65) Which of the following is the best choice for a return type from a method that prompts users to enter their password?

- a) char
- b) int
- c) String
- d) void

c) String



66) What is incorrect in the



following code snippet?

```
public static void
displayBox(String str)
{
System.out.println("-----");
System.out.println(str);
System.out.println("-----");
}
public static void main(String[]
args)
{
System.out.println(displayBox("
Hello World"));
}
```

- a) displayBox is called with incorrect arguments.
- b) displayBox should be called in an assignment statement.
- c) The return value from displayBox is never used.
- d) displayBox does not return a value; therefore, it cannot be used with System.out.println

Answer: d

d) displayBox does not return a value; therefore, it cannot be used with System.out.println

67) Which of the following code snippets can be used for defining a method that does not return a value? The method should accept a string and then display the string followed by "And that's all folks!" on a separate line.

a)

b)

```
public static void displayMessage(String str)
{
System.out.println(str);
System.out.println("And that's all folks!");
}
```



```
public static String  
displayMessage(String str)  
{  
    System.out.println(str);  
    System.out.println("And that's all  
folks!");  
}  
b)  
public static void  
displayMessage(String str)  
{  
    System.out.println(str);  
    System.out.println("And that's all  
folks!");  
}  
c)  
public static void  
displayMessage(String str)  
{  
    System.out.println(str);  
    System.out.println("And that's all  
folks!");  
    return str;  
}  
d)  
public static void  
displayMessage()  
{  
    System.out.println(str);  
    System.out.println("And that's all  
folks!");  
}
```

68) For a program that reads city names repeatedly from the user and calculates the distance from a company's headquarters, which of the following would be

c) Write one method that reads city name and another method that calculates distance.



a good design based on stepwise refinement?

- a) Write one method that calculates distance randomly.
- b) Write one method that reads city name.
- c) Write one method that reads city name and another method that calculates distance.
- d) Write one method that reads distance and finds city name.

69) Which of the following options describes the process of stepwise refinement?

- I. Using arguments to pass information to a method
- II. Using unit tests to test the behavior of methods
- III. Decomposing complex tasks into simpler ones

- a) I
- b) II
- c) III
- d) I, II, and III

c) III



70) What is the purpose of writing a stub method?

- a) To test another method without writing all the implementation details of a method called by the method being tested
- b) To provide a simpler

a) To test another method without writing all the implementation details of a method called by the method being tested



implementation of a complex method

c) To run a unit test for another method

d) To call a method that is being developed

71) A temporary method that is used to provide a quick way to test other methods is called:

- a) Stub
- b) Parameter
- c) Caller
- d) Assessor

a) Stub



72) What is a good rule for deciding the number of statements in a method?

- a) It is fine to put as many statements in the method as possible.
- b) The method should perform multiple tasks and contain multiple statements.
- c) The method should perform only one task and contain just enough statements for the task.
- d) The method should contain no more than 3 statements.

c) The method should perform only one task and contain just enough statements for the task.



74) Assuming that a user enters 45 as the brightness of a lamp, which of the following hand trace tables is valid for the code below?

```
public static void main(String[]
```

a)

Brightness Description

0 ""

45 "pleasant"

"dim"



```
args)
{
int brightness = 0;
Scanner in = new
Scanner(System.in);
System.out.print(
"Please enter your lamp
brightness (in watts): ");
brightness = in.nextInt();
System.out.println("Lamp is " +
getDescription(brightness));
}

public static String
getDescription(int brightness)
{
String description = "";

if (brightness >= 120)
{
description = "very bright";
if (brightness >= 100)
{
description = "bright";
}
}
else
{
description = "pleasant";
if (brightness <= 50)
{
description = "dim";
}
}
return description;
}
```

a)

Brightness Description

0 ""

45 "pleasant"

"dim"

b)

Brightness Description

0 "very bright"

45 "bright"

c)

Brightness Description

0 ""

45 "bright"

"pleasant"

d)

Brightness Description

0 "bright"

45 "pleasant"

Answer: a

73) Assuming that a user enters 22 as the price of an item, which of the following hand trace tables is valid for the code below?

```
public static void main(String[]
args)
{
int price = 0;
Scanner in = new
Scanner(System.in);
System.out.print("Please enter
object's price: ");
```

a)

Price Status

0 ""

22 "inexpensive"

"reasonable"




```
price = in.nextInt();  
System.out.println("Object price  
is " + getStatus(price));  
}
```

```
public static String getStatus(int  
price)  
{  
String status = "";  
if (price >= 50)  
{  
status = "reasonable";  
if (price >= 75)  
{  
status = "costly";  
}  
}  
else  
{  
status = "inexpensive";  
if (price <= 25)  
{  
status = "reasonable";  
}  
}  
return status;  
}
```

a)
Price Status
0 ""
22 "inexpensive"
"reasonable"

b)
Price Status
0 "inexpensive"
22 "reasonable"

c)

Price Status

0 ""

22 "reasonable"

"costly"

d)

Price Status

0 "reasonable"

22 "costly"

Answer: a

75) Given the following method, what method call will return true?

```
public static boolean
isValid(String input)
{
    boolean valid = true;
    if (input.length() != 11)
    {
        valid = false;
    }
    else
    {
        if (input.charAt(3) != '-' ||
            input.charAt(6) != '-')
        {
            valid = false;
        }
        else
        {
            valid =
            Character.isDigit(input.charAt(0))
            &&
```

c) isValid("123-45-6789")



```

Character.isDigit(input.charAt(1))
&&
Character.isDigit(input.charAt(2))
&&
Character.isDigit(input.charAt(4))
&&
Character.isDigit(input.charAt(5))
&&
Character.isDigit(input.charAt(7))
&&
Character.isDigit(input.charAt(8))
&&
Character.isDigit(input.charAt(9))
&&
Character.isDigit(input.charAt(10))
);

}
}
return valid;
}

```

- a) isValid("123-45-67")
- b) isValid("123-456789")
- c) isValid("123-45-6789")
- d) isValid("ABC-45-6789")

76) Given the following method that checks for a valid 5-digit number, what do we need to fix?

```

public static boolean
isValid(String s)
{
if (s != null && s.length() == 5)
{
int i = 0;

```

c) Add a return statement inside the "if" branch



```

boolean b =
Character.isDigit(s.charAt(i)) &&
Character.isDigit(s.charAt(i + 1))
&&
Character.isDigit(s.charAt(i + 2))
&&
Character.isDigit(s.charAt(i + 3))
&&
Character.isLetter(s.charAt(i +
4));
}
else
{
return false;
}
}

```

- a) Change the parameter variable type to integer
- b) Add another local Boolean variable definition
- c) Add a return statement inside the "if" branch
- d) Add a new Boolean parameter variable

77) Given the following method, what do we need to fix?

```

public static String
getPerformance(char grade)
{
if (grade == 'A' || grade == 'B' ||
grade == 'C' || grade == 'D'
|| grade == 'F')
{
String desc = "";
switch (grade)

```

d) Move the definition of the local variable desc before the if statement



```
{
case 'A': desc = "Excellent";
break;
case 'B': desc = "Good"; break;
case 'C': desc = "Mediocre";
break;
case 'D': desc = "Weak"; break;
case 'F': desc = "Bad"; break;
}
}

return desc;
}
```

- a) Change the parameter variable type to String
- b) Add a local Boolean variable definition to test the input
- c) Add return statements inside the switch branches
- d) Move the definition of the local variable desc before the if statement

78) Given the following method, what is the result of `getNumber(n)`?

```
public static double
getNumber(double n)
{
return Math.pow(Math.sqrt(n), 2)
- n;
}
```

- a) Always 0 for every argument
n
- b) Always 2 for every argument

d) Compilation error



n

c) Close to 0, but not always 0

d) Compilation error

79) Given the following method:

```
public static boolean
isMagic(int number)
{
int j = 2;
boolean result = false;

while (j <= number / 2)
{
if (number % j == 0)
{
result = true;
}
j++;
}

return result;
}
```

What argument(s) will cause the result of the method to be true?

I. 197

II. 224

III. 231

IV. 341

a) I and II

b) II and III

c) II, III, and IV

d) I and III

c) II, III, and IV



80) What does the following

b) Simulates the throwing of a pair of dice 10 times



code do?

```
public static int getNumber(int
number)
{
return (int) (Math.random() *
number) + 1;
}
public static void main(String[]
args)
{
for (int i = 1; i <= 10; i++)
{
System.out.println(getNumber(6
) + " " + getNumber(6));
}
}
```

- a) Generates any 10 random numbers
- b) Simulates the throwing of a pair of dice 10 times
- c) Generates 10 Fibonacci numbers
- d) Generates the same random number 20 times

81) Which of the following options represents the output of the given code snippet?

```
public static int addsub(int a,
boolean isSub)
{
if (isSub) { return sub(a); }
else {return a + 1; }
}
public static int sub(int a)
```

c) Sub 5 = 6, Add 6 = 5



```
{  
return a - 1;  
}  
public static void main(String[]  
args)  
{  
System.out.println("Sub 5 = " +  
addsub(5, false) +  
", Add 6 = " + addsub(6, true));  
}
```

- a) Sub 5 = 6, Add 6 = 6
- b) Sub 5 = 4, Add 6 = 7
- c) Sub 5 = 6, Add 6 = 5
- d) Sub 5 = 4, Add 6 = 6

82) For a program that reads three letter grades and calculates an average of those grades, which of the following would be a good design based on stepwise refinement?

- a) Write one method that reads three letter grades, converts each letter grade to a number, and calculates the average of the three numbers.
- b) Write one method that reads three letter grades, and a second method to convert each letter to a number and calculate the average of the three numbers.
- c) Write one method that reads a letter grade and returns the number equivalent, and one method that computes the

c) Write one method that reads a letter grade and returns the number equivalent, and one method that computes the average of three numbers.



average of three numbers.

d) Stepwise refinement cannot be applied to this problem.

83) An effective technique for understanding the subtle aspects of a method is to:

- a) Perform a manual walkthrough.
- b) Write stub methods.
- c) Use the Java compiler to catch compile-time errors.
- d) Write large methods to eliminate the run-time overhead of calling methods.

a) Perform a manual walkthrough.



84) Given the following method, what do we need to fix?

```
public static String
getPerformance(char grade)
{
switch (grade)
{
case 'A': return "Excellent";
break;
case 'B': return "Good"; break;
case 'C': return "Mediocre";
break;
case 'D': return "Weak"; break;
case 'F': return "Bad"; break;
}
}
```

- a) Remove all the break statements
- b) Add a local boolean variable

c) Remove all the break statements and add a return statement before the end of method



definition

- c) Remove all the break statements and add a return statement before the end of method
- d) Remove the switch statement and use and if statement

85) In the following code snippet, what is the scope of variable b?

```
public static void m1()
{
int i = 0;
double b = 0;
}
public static void m2()
{
double a = b + 1;
}
public static void main(String[]
args)
{
m1();
m2();
}
```

- a) It can be used only in m1.
- b) It can be used in user-defined methods m1 and m2.
- c) It can be used anywhere in this program.
- d) It can be used in many programs.

a) It can be used only in m1.



86) What is the output of the following code snippet?

c) Priority: 5



```
public static int assignPriority(int
priority)
{
return priority + 2;
}
public static void main(String[]
args)
{
int priority = assignPriority(3);
System.out.println("Priority: " +
priority);
}
```

- a) Priority: 2
- b) Priority: 3
- c) Priority: 5
- d) There is no output because the program does not compile

87) Which of the following is correct about a local variable?

- a) It is declared before all the methods in a program.
- b) It is visible to all the methods declared after it.
- c) It is declared exclusively in the main method.
- d) It is declared within the scope of any method.

d) It is declared within the scope of any method.



88) What is the output of the following code snippet?

```
public static void main(String[]
args)
{
```

d) No output due to compilation error



```
int gvar = 0;
gvar = gvar + 10;
if (gvar > 0)
{
int lvar = gvar + 1;
}
System.out.println(lvar);
}
```

- a) 1
- b) 10
- c) 11
- d) No output due to compilation error

89) For the given code snippet, which of the following statements is true?

```
public static double
raise(double rate)
{
double newPayRate = rate * 1.1;
return newPayRate;
}
public static void main(String[]
args)
{
double rate = 40.0;
double newPayRate = 0.0;
newPayRate = raise(rate);
System.out.println("Pay rate: " +
newPayRate);
}
```

- a) The code snippet executes and displays "Pay rate: 40.0"
- b) The code snippet executes

) The code snippet executes and displays "Pay rate: 44.0"



and displays "Pay rate: 44.0"

- c) The code snippet executes and displays "Pay rate: 0.0"
- d) There is no output because the program does not compile

90) What is the output of the following code snippet?

```
public static int dolt(int a, int
prv1, int nxt1)
{
int prv = a - prv1;
int nxt = a + nxt1;
return prv;
}
public static void main(String[]
args)
{
int a = 100;
int b = 100;
int c = 100;
b = dolt(a, b, c);
System.out.println("b = " + b + ", c
= " + c);
}
```

- a) b = 100, c = 101
- b) b = 99, c = 101
- c) b = 0, c = 100
- d) b = 0, c = 101

c) b = 0, c = 100



91) What is the output of the following code snippet?

```
public static int blackBox(int a)
{
int val;
```

c) 7



```
if (a <= 0)
{
val = 1;
}
else
{
val = a + blackBox(a - 2);
}
return val;
}
public static void main(String[]
args)
{
System.out.println(blackBox(4));
}
```

- a) 4
- b) 1
- c) 7
- d) 2

92) What is the output of the following code snippet?

```
public static int fun(int x)
{
int returnValue = 0;
if (x > 5)
{
returnValue = x;
}
else
{
returnValue = fun(2 * x);
}
return returnValue;
}
public static void main(String[]
```

b) fun(2) = 8



```
args)
{
System.out.println("fun(2) = " +
fun(2));
}
```

- a) fun(2) = 4
- b) fun(2) = 8
- c) fun(2) = 16
- d) fun(2) = 32

93) Based on the code snippet, which of the following statements is correct?

```
public static void reoccur(int
count)
{
System.out.println(count);
reoccur(count + 1);
}
public static void main(String[]
args)
{
reoccur(1);
}
```

- a) The code snippet gives a compilation error as the reoccur method cannot call itself.
- b) The code snippet executes and infinitely recurses, displaying 1, 2, 3, 4, and so on.
- c) The code snippet executes and displays 1.
- d) The code snippet executes and does not produce any output

b) The code snippet executes and infinitely recurses, displaying 1, 2, 3, 4, and so on.





94) What is the output if the method call is testMyVal(6) in the following code snippet?

a) 0 2 4 6

```
public static void testMyVal(int nval)
{
    if (nval > 0)
    {
        testMyVal(nval - 2);
    }
    System.out.print(nval + " ");
}
```

a) 0 2 4 6

b) 0 0 0 0

c) 6 6 6 6

d) 6 4 2 0

Answer: a

95) Given the method below, what is the output of the method call is div(10)?

c) 0 3

```
public static void div(int n)
{
    if (n > 2)
    {
        div(n % 3);
    }
    System.out.print(n / 3 + " ");
}
```

a) 0 10

b) 3

c) 0 3

d) 10





96) Which of the following code snippets returns the factorial of a given number? (Hint: Factorial of 5 = 5! = 1 **2** 3 **4** 5 = 120)

a)

```
public static int factorial(int num)
{
return num * factorial(num - 1);
}
```

b)

```
public static int factorial(int num)
{
if (num == 1)
{
return 1;
}
return num * factorial(num);
}
```

c)

```
public static int factorial(int num)
{
if (num == 1)
{
return 1;
}
System.out.println(num * factorial(num - 1));
}
```

d)

```
public static int factorial(int num)
{
if (num == 1)
```

d)

```
public static int factorial(int num)
{
if (num == 1)
{
return 1;
}
return num * factorial(num - 1);
}
```

```
{
return 1;
}
return num * factorial(num - 1);
}
```

Answer: d

97) Given the method below, what is the result of the method call `recstr("#", 5)`?

```
public static void recstr(String s,
int d)
{
if (d <= 1)
{
System.out.print (d);
}
else
{
s = s + "/";
recstr(s, d - 2);
System.out.print (s + d);
}
}
```

- a) 1//#3/#5
- b) 1#//3#/5
- c) 1##/#/5
- d) 0##/#/5

b) 1#//3#/5



98) Which method header is appropriate for this method body?

```
{
if (num1 < num2)
```

b) `public static int comp(int num1, int num2)`



```
{  
return num1;  
}  
return num2;  
}
```

- a) public static void comp(int num1, int num2)
- b) public static int comp(int num1, int num2)
- c) public static boolean comp(int num1, int num2)
- d) public static int comp(int num1, double num2)

99) What is the output of the following code snippet?

```
public static int someMethod(int  
x)  
{  
int result = 0;  
if (x > 10)  
{  
result = x;  
}  
else  
{  
result = someMethod(4 * x);  
}  
return result;  
}  
public static void main(String[]  
args)  
{  
System.out.println("someMetho  
d(2) = " + someMethod(2));  
}
```

c) someMethod (2) = 32



- a) someMethod (2) = 8
- b) someMethod (2) = 16
- c) someMethod (2) = 32
- d) someMethod (2) = 64

100) Based on the code snippet below, which of the following statements is correct?

```
public static void
recursiveMethod(int count)
{
    recursiveMethod(count + 2);
    System.out.println(count);
}
public static void main(String[]
args)
{
    recursiveMethod(1);
}
```

- a) The code snippet gives a compilation error as the recursiveMethod method cannot call itself.
- b) The code snippet executes and infinitely recurses but does not print anything.
- c) The code snippet executes and displays 1.
- d) The code snippet executes and does not produce any output.

b) The code snippet executes and infinitely recurses but does not print anything.



101) Given the code below, what is the output of the method call `hashIt("#", 6)`?

a) 0###2###4#/6



```

public static void hashIt(String s,
int d)
{
if (d <= 1)
{
System.out.print(d);
}
else
{
s = s + "/";
hashIt(s, d - 2);
System.out.print(s + d);
}
}

```

- a) 0#//2#//4#/6
- b) 0#/2#//4#//6
- c) 0/2#//4#//6#
- d) #/6#//4#//20

102) Which of the following method declarations would be appropriate for a method that compares 2 numbers?

The method body is shown here:

```

{
return num1 > num2;
}

```

- a) public static void compare(int num1, int num2)
- b) public static int compare(int num1, int num2)
- c) public static boolean

c) public static boolean compare(int num1, int num2)



compare(int num1, int num2)

d) public static double

compare(int num1, int num2)
