1. If age is 23 what will ticket be after the code in the flowchart below?

ticket = 10

ticket += 5

ticket += 3

age < 21

F

T

Value of ticket? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What would be a good expression in Java for age between 10 and 19 (inclusive)?

 a. age > 9 || age < 20  
 b. age >= 10 && < 20  
 c. age >= 10 && age < 20  
 d. 9 < age < 21

1. In order to graduate a student needs at least 120 credits and a gpa over 1.0 (I'm making this up).  What would be a good expression for this?

 a. credits > 120 || gpa > 1.0  
 b. gpa >= 1.0 && credits > 120  
 c. gpa > 1.0 && credits >= 119  
 d. gpa > 1.0 || credits >= 120  
 e. none of these

# Write down the result when evaluating the following expression:

(assume x = 11, y = 5 and z = 25.0)

x > 10 && y == 5 || z > x + y

1. Evaluate the following expression.

int a = 10, b = 15;

double c = 5.0;

a + 9 < c \* 2 && b / 2 == 7.5 || (int)( c / 2 \* 3) == 7

1. What will the following print if price = 10 and cash = 15?

if (price < cash)   
  System.out.print("buy ");   
System.out.println("books");

 a. books  
 b. buy\nbooks  
 c. buy books  
 d. buy

1. What will the following print if age is 5? 10? 21?

System.out.print("You shall ");   
if(age < 10 || age > 21)   
  System.out.print("not ");   
System.out.println("pass");

|  |  |  |
| --- | --- | --- |
| 5 | 10 | 21 |
|  |  |  |

 a. pass  
 b. You shall not pass  
 c. You shall pass  
 d. none of the above

1. Are the following two sections of code equivalent?

//section 1

int fee=0;   
if(age < 14)   
  fee=10;   
else   
  fee=15;

//section 2  
int fee=10;   
if(age>=14)   
  fee=15;

 a. yes, they will always do the same thing  
 b. no, they will be different when age < 14  
 c. no, they will be different when age=14

1. What is wrong (assume qty and MAX\_QTY have been assigned values)?

int price = 20;

if( qty < MAX\_QTY);

  price = 14;

 a. syntax error - semicolon after if  
 b. logic error - semicolon after if  
 c. uh, nope, nothing wrong

1. What is wrong?

if( age < 19)

  price += 2;

else

  price = price;

 a. semicolon after the if  
 b. age < 19 is not a boolean expression  
 c. the else does nothing - it should be removed

1. What is wrong (assume age is an int and admit is a boolean)?

if( age = 12)

  admit = true;

else

  admit = false;

 a. nothing, it is perfect  
 b. age = 12 is not a boolean expression  
 c. there should be a semicolon after the if

1. What will this print?

x=3, y=10   
z = 4.5   
  
if(x<y && y<z)   
  if((int)z == x+1)

    System.out.println("first");

  else   
    System.out.println("second");   
else   
  if((int)z == x+1)   
    System.out.println("thirst");   
  else

    System.out.println("fourth");

 a. first  
 b. thirst  
 c. fourth  
 d. second

1. Write a method to accept or reject applicants based on sat scores and gpa:

// return true if sat > 1200 or

// if their sat is more than 1000 and their gpa is 2.7 or higher

public boolean acceptApplicant(int sat, double gpa)

{

}

1. write the code to calculate scholarship money

// act can be either: 's' sports, 'a' for academic clubs, or ' ' for nothing

// govt is true if they participated in student govt

// volHrs is the number of volunteer hours they had

// A student can get all the scholarships that apply

// 1000 for sport and gpa higher than 3.0 or 500 for just sports (act == 's')

// 1000 for gpa higher than 3.5 and academic clubs (act == 'a')

// 500 if they were in student government

// 500 if they volunteered for more than 100 hours

public double calcScholarship(double gpa, char act, boolean govt, int volHrs)

{

}