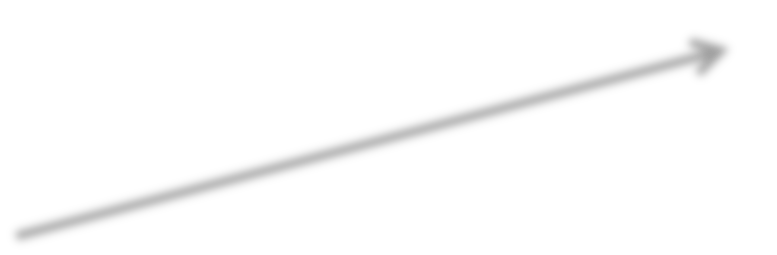
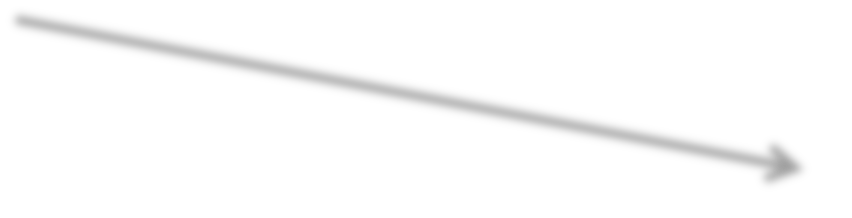
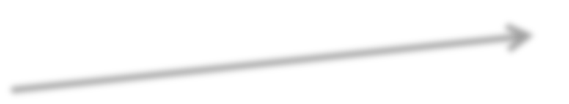
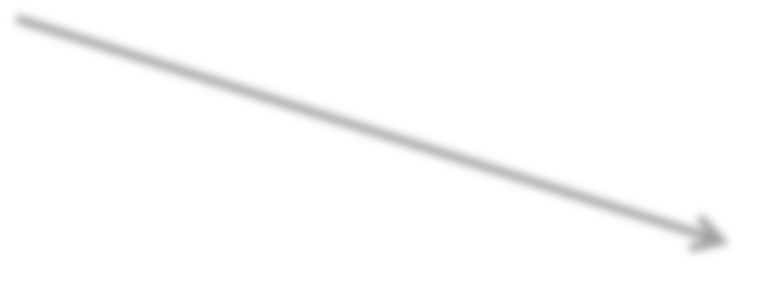
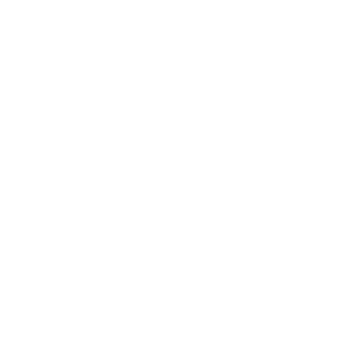
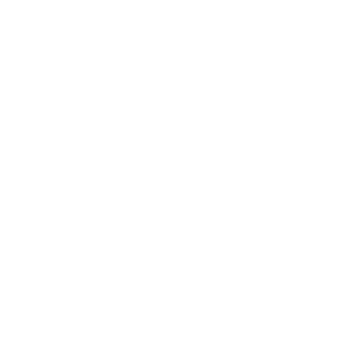
**Activity 4 Solutions**

**Question 1:** Select the proper type for the following values:



8

double

8.0

String

‘8’ int

“8”

char

**Question 2:** Which of the following are valid identifiers? Explain

|  |  |  |
| --- | --- | --- |
| Variable name | Valid or Invalid? | Explain |
| ***w*** | Valid |  |
| ***Variable*** | Valid |  |
| ***variable\_1*** | Valid |  |
| ***%variable*** | Invalid | mod |
| ***1myVariable*** | Invalid | Start with numbers |
| ***Void*** | Valid | Case sensitive |

**Question 3:** Given the following declarations, what result is stored in each of the listed assignment statements?

**int** iResult, num\_1 = 25, num\_2 = 40, num\_3 = 17, num\_4 = 5;

**double** fResult, val\_1 = 17.0, val\_2 = 12.78;

|  |  |  |
| --- | --- | --- |
|  | **Result stored** | **Type of value** |
| iResult = num\_1 / num\_4; | 5 | int |
| num\_4 += 7; | 12 | Int |
| num\_1 -= 5; | 20 | Int |
| fResult = num\_1 / num\_4; | 5.0 | double |

|  |  |  |
| --- | --- | --- |
| iResult = num\_3 / num\_4; | 3 | Int |
| fResult = num\_3 / num\_4; | 3.0 | double |
| num\_4 \*= num\_1 + num\_2; | 325 | Int |
| fResult = val\_1 / num\_4; | 3.4 | double |
| fResult = val\_1 / val\_2; | 1.3302034 | double |
| iResult = num\_1 / num\_2; | 0 | Int |
| fResult = (double) (num\_1 / num\_2); | 0.0 | double |
| iResult = (int) (val\_1 / num\_4); | 3 | Int |
| fResult = (int) (val\_1 / num\_4); | 3.0 | double |
| fResult = (int) ((double)num\_1 / num\_2); | 0.0 | double |
| iResult= num\_3 % num\_4; | 2 | int |
| iResult= num\_2 % num\_3; | 6 | int |
| iResult= num\_3 % num\_2; | 17 | int |
| iResult= num\_2 % num\_4; | 0 | int |
| val\_1 /= 2; | 8.5 | double |

**Question 4:** Assume the following fragment of code:

short age;

double rebate = 0;

boolean isAStudent;

int workExperience;

…

if (age < 10)

rebate = 20;

if (age > 70)

rebate = 20;

if (age < 20)

if (isAStudent)

if (workExperience > 4)

rebate = 15;

Rewrite the instructions outlined in yellow by reducing the number of if statements to a

minimum. Your new code should behave exactly as the above code in every possible situation.

Answer:

if((age<10)||(age>70))

rebate = 20;

if((age<20)&&(isAStudent)&&(workExperience>4))

rebate=15;

**Question 5:** What is the output of the following piece of code (solve without using IDE at first, then check it afterwards to confirm your solution):

int i = 0, j = 2;

Output:

2

do {

i = ++i;

j--;

} while(j>0);

System.*out.println(i);*