**Trace the output of the following programs**

**[In the following tasks first trace the output of the code by hand then save->compile->run it in Dr. Java to verify your answers]**

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| **1** | **public class Q1** |
| **2** | **{** |
| **3** | **public static void main(String[] args)** |
| **4** | **{** |
| **5** | **int x = 0, y =0;** |
| **6** | **intsum = 0;** |
| **7** | **while (x < 10){** |
| **8** | **y = x - 3;** |
| **9** | **y = 40;** |
| **10** | **while (y > 22){** |
| **11** | **if ((sum > 30) && (sum < 40))** |
| **12** | **sum = sum + x \* 2 ;** |
| **13** | **else if ((sum > 40) && (sum < 50))** |
| **14** | **sum = sum + x \* 3;** |
| **15** | **else** |
| **16** | **sum = sum + 23;** |
| **17** | **System.out.println(sum);** |
| **18** | **y = y - 10;** |
| **19** | **}** |
| **20** | **x += 2;** |
| **21** | **}** |
| **22** | **}** |
| **23** | **}** |

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| **1** | **public class Q2** |
| **2** | **{** |
| **3** | **public static void main(String[] args)** |
| **4** | **{** |
| **5** | **String test = "";** |
| **6** | **inti = 0, j = 0, k = 15;** |
| **7** | **while (i< 5){** |
| **8** | **test = "-->";** |
| **9** | **j = --k;** |
| **10** | **while (j > 10 ){** |
| **11** | **test = i + j + test + i + j;** |
| **12** | **System.out.println(test);** |
| **13** | **j--;** |
| **14** | **}** |
| **15** | **i++;** |
| **16** | **}** |
| **17** | **}** |
| **18** | **}** |

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| **1** | **public class Q3{** |
| **2** | **public static void main(String[] args){** |
| **3** | **int x = 0, y =0;** |
| **4** | **int sum = 0;** |
| **5** | **while (x < 10){** |
| **6** | **y = x - 3;** |
| **7** | **while (y < 3){** |
| **8** | **sum = (sum % 2) + x - y \* 2 ;** |
| **9** | **System.out.println(sum);** |
| **10** | **y = y + 1;** |
| **11** | **}** |
| **12** | **if (x > 5){** |
| **13** | **x++;** |
| **14** | **}else{** |
| **15** | **x += 2;** |
| **16** | **}** |
| **17** | **}** |
| **18** | **}** |
| **19** | **}** |

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| **1** | **public class Q4{** |
| **2** | **public static void main(String[] args){** |
| **3** | **int x = 0, i =0, sum = 0;** |
| **4** | **i = 1;** |
| **5** | **x = 2;** |
| **6** | **sum = 0;** |
| **7** | **while (i< 20){** |
| **8** | **x = x + i;** |
| **9** | **sum = sum + x + 1;** |
| **10** | **System.out.println(sum);** |
| **11** | **if (x > 5)** |
| **12** | **i += 2;** |
| **13** | **Else** |
| **14** | **i += 3;** |
| **15** | **}** |
| **16** | **sum = sum + i;** |
| **17** | **System.out.println(sum);** |
| **18** | **}** |
| **19** | **}** |

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| **1** | **public class Q5{** |
| **2** | **public static void main(String[] args){** |
| **3** | **String test = "";** |
| **4** | **inti = 0, j = 0, k = 15;** |
| **5** | **test = "-->";** |
| **6** | **while (i< 5){** |
| **7** | **j = --k;** |
| **8** | **while (j > 10 ){** |
| **9** | **test = i + j + "-->" + test;** |
| **10** | **System.out.println(test);** |
| **11** | **j--;** |
| **12** | **}** |
| **13** | **i++;** |
| **14** | **}** |
| **15** | **}** |
| **16** | **}** |

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| **1** | **public class Q6{** |
| **2** | **public static void main(String[] args){** |
| **3** | **int x = 0, p =0, sum = 0;** |
| **4** | **p = 1;** |
| **5** | **x = 2;** |
| **6** | **double q;** |
| **7** | **sum = 0;** |
| **8** | **while (p < 10){** |
| **9** | **q = x + p-(sum+5/3)/3.0%2 ;** |
| **10** | **sum = sum + (x++) + (int)q;** |
| **11** | **System.out.println(sum);** |
| **12** | **if (x > 5)** |
| **13** | **p += 4/2;** |
| **14** | **else** |
| **15** | **p += 3%1;** |
| **16** | **}** |
| **17** | **sum = sum + p;** |
| **18** | **System.out.println(sum);** |
| **19** | **}** |
| **20** | **}** |

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| **1** | **public class Q7{** |
| **2** | **public static void main(String[] args){** |
| **3** | **int test = 1;** |
| **4** | **int j = 0, k = 100;** |
| **5** | **while (k > 0){** |
| **6** | **while (j < k ){** |
| **7** | **test = k - j + 21;** |
| **8** | **System.out.println(1 + test);** |
| **9** | **j += 10;** |
| **10** | **}** |
| **11** | **k -= 10;** |
| **12** | **}** |
| **13** | **}** |
| **14** | **}** |

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| **1** | **public class Q8{** |
| **2** | **public static void main(String[] args){** |
| **3** | **int test = 1;** |
| **4** | **int j = 0, k = 100;** |
| **5** | **while (k > 0){** |
| **6** | **while (j < k ){** |
| **7** | **test = k - j + 11;** |
| **8** | **System.out.println(1 + test / 3 +"12");** |
| **9** | **j+=10;** |
| **10** | **}** |
| **11** | **k-=10;** |
| **12** | **}** |
| **13** | **}** |
| **14** | **}** |

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| **1** | **public class Q9{** |
| **2** | **public static void main(String[] args){** |
| **3** | **int x = 0;** |
| **4** | **int y = 0;** |
| **5** | **int sum = 0;** |
| **6** | **double p;** |
| **7** | **while(x <18){** |
| **8** | **y = x / 2;** |
| **9** | **while(y < x){** |
| **10** | **p = (x + 15.0) /2;** |
| **11** | **sum = (sum + 3) + x + y \* 3 + (int)p;** |
| **12** | **System.out.println(sum);** |
| **13** | **y = y + 3;** |
| **14** | **}** |
| **15** | **x = x + 3;** |
| **16** | **}** |
| **17** | **}** |
| **18** | **}** |

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| **1** | **public class Q10 {** |
| **2** | **public static void main(String[] args) {** |
| **3** | **int x = 0, y = 0;** |
| **4** | **String sum = "0";** |
| **5** | **double p;** |
| **6** | **while (x < 9) {** |
| **7** | **y = x / 2;** |
| **8** | **while (y < x) {** |
| **9** | **p = (x + 5.0) / 2;** |
| **10** | **sum = (sum + 2) + x + "y \* 2" + (int) p ;** |
| **11** | **System.out.println(sum);** |
| **12** | **y = y + 1;** |
| **13** | **}** |
| **14** | **x = x + 2;** |
| **15** | **if (x > 5) {** |
| **16** | **sum = "2";** |
| **17** | **} else {** |
| **18** | **sum += "3";** |
| **19** | **}** |
| **20** | **}** |
| **21** | **}** |
| **22** | **}** |

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| **1** | **public class Q11 {** |
| **2** | **public static void main(String[] args) {** |
| **3** | **String test = "";** |
| **4** | **int i = 1, j = 1, k = 14;** |
| **5** | **test = "-->";** |
| **6** | **while (i< 5) {** |
| **7** | **j = --k;** |
| **8** | **while (j > 9 ) {** |
| **9** | **test = i + (j-2) + "-->" + test;** |
| **10** | **System.out.println(test);** |
| **11** | **j--;** |
| **12** | **}** |
| **13** | **i++;** |
| **14** | **}** |
| **15** | **}** |
| **16** | **}** |

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| **1** | **public class Q12 {** |
| **2** | **public static void main(String[] args) {** |
| **3** | **int p = 5;** |
| **4** | **int q = 6;** |
| **5** | **int r = 9;** |
| **6** | **int sum = 0;** |
| **7** | **if (p < 12) {** |
| **8** | **System.out.println(r + 2);** |
| **9** | **} else {** |
| **10** | **System.out.println(r + p);** |
| **11** | **}** |
| **12** |  |
| **13** | **if (q > 20){** |
| **14** | **System.out.println(r + 19);** |
| **15** | **} else if (q <= 6) {** |
| **16** | **System.out.println(q + 3);** |
| **17** | **} else{** |
| **18** | **System.out.println(p + q + r);** |
| **19** | **}** |
| **20** |  |
| **21** | **if (r > 15) {** |
| **22** | **System.out.println(r);** |
| **23** | **} else if (r == 0) {** |
| **24** | **System.out.println(p + q);** |
| **25** | **} else {** |
| **26** | **System.out.println(p);** |
| **27** | **}** |
| **28** |  |
| **29** | **if (sum != 0) {** |
| **30** | **System.out.println(3);** |
| **31** | **} else {** |
| **32** | **System.out.println(sum + 32);** |
| **33** | **}** |
| **34** |  |
| **35** | **if(p > 0 && r < 10){** |
| **36** | **System.out.println(p + r);** |
| **37** | **} else {** |
| **38** | **System.out.println(p - r);** |
| **39** | **}** |
| **40** | **}** |
| **41** | **}** |

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| **1** | **public class Quiz13 {** |
| **2** | **public static void main(String[] args){** |
| **3** | **int x = 0, p = 0, sum = 0;** |
| **4** | **p = 1;** |
| **5** | **x = 2;** |
| **6** | **double q;** |
| **7** | **sum = 0;** |
| **8** | **while (p < 10) {** |
| **9** | **q = x + p-(sum+5/3)/3.0%2 ;** |
| **10** | **sum = sum + (x++) + (int)q;** |
| **11** | **System.out.println(sum);** |
| **12** | **if (x > 5)** |
| **13** | **p += 4/2;** |
| **14** | **Else** |
| **15** | **p += 3%1;** |
| **16** | **}** |
| **17** | **sum = sum + p;** |
| **18** | **System.out.println(sum);** |
| **19** | **}** |
| **20** | **}** |

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| **1** | **public class Q14 {** |
| **2** | **public static void main(String[] args) {** |
| **3** | **int x = 0, i =0, sum = 0;** |
| **4** | **i = 1;** |
| **5** | **x = 2;** |
| **6** | **sum = 0;** |
| **7** | **while (i< 20){** |
| **8** | **x = x + i;** |
| **9** | **sum = sum + x + 1;** |
| **10** | **System.out.println(sum);** |
| **11** | **if (x > 5)** |
| **12** | **i += 2;** |
| **13** | **Else** |
| **14** | **i += 3;** |
| **15** | **}** |
| **16** | **sum = sum + i;** |
| **17** | **System.out.println(sum);** |
| **18** | **}** |
| **19** | **}** |

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| **1** | **public class Q15 {** |
| **2** | **public static void main(String[] args) {** |
| **3** | **int x = 0, y =0;** |
| **4** | **intsum = 0;** |
| **5** | **while (x < 10){** |
| **6** | **y = x - 3;** |
| **7** | **y = 40;** |
| **8** | **while (y > 22){** |
| **9** | **if ((sum > 30) && (sum < 40))** |
| **10** | **sum = sum + x \* 2 ;** |
| **11** | **else if ((sum > 40) && (sum < 50))** |
| **12** | **sum = sum + x \* 3;** |
| **13** | **else** |
| **14** | **sum = sum + 23;** |
| **15** | **System.out.println(sum);** |
| **16** | **y = y - 10;** |
| **17** | **}** |
| **18** | **x += 2;** |
| **19** | **}** |
| **20** | **}** |
| **21** | **}** |

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| **1** | **public class Q16 {** |
| **2** | **public static void main(String[] args) {** |
| **3** | **boolean var1 = false, var2 = false, var3 = false, var4 = false,var5 = false;** |
| **4** | **boolean var6 = false, result1 = false, result2 = false, result3 = false, result4 = false;** |
| **5** | **boolean result5 = false, result6 = false, result7 = false, result8 = false;** |
| **6** | **boolean result9 = false, result10 = false;** |
| **7** | **var1 = 4 > 3 - 1;** |
| **8** | **var2 = var1 && false;** |
| **9** | **var3 = true;** |
| **10** | **var4 = false;** |
| **11** | **var5 = true;** |
| **12** | **var6 = var3 && false;** |
| **13** | **result1 = (var1 || var2) && (8 \* 10 > 45);** |
| **14** | **result2 = (var1 || var2) && (result1 && false);** |
| **15** | **result3 = (var1 && result1) || result2;** |
| **16** | **result4 = (var1 || var2) || ((var3 && var1) && false);** |
| **17** | **result5 = (var1 && var2) && (result3 || var1);** |
| **18** | **result6 = ((var3 || var2) && !(result5)) || true;** |
| **19** | **result7 = (var4 && result1) && ((result1 && false) || true);** |
| **20** | **Result8 = ((var1 && result3) && (var5 || var6)) && true;** |
| **21** | **result9 = ((result2 && var2) || (result7 && var1)) && false;** |
| **22** | **result10 = !(var1 && true);** |
| **23** | **}** |
| **24** | **}** |

**Show the values of the result variables in the above program:**

|  |  |
| --- | --- |
| **result1** |  |
| **result2** |  |
| **result3** |  |
| **result4** |  |
| **result5** |  |
| **result6** |  |
| **result7** |  |
| **result8** |  |
| **result9** |  |
| **result10** |  |

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| **1** | **public class Q17 {** |
| **2** | **public static void main(String[] args) {** |
| **3** | **int x = 0, i = 0, sum = 0;** |
| **4** | **i = 1;** |
| **5** | **x = 2;** |
| **6** | **sum = 0;** |
| **7** | **while (i< 20) {** |
| **8** | **x = x + i;** |
| **9** | **sum = sum + x + 3;** |
| **10** | **System.out.println(sum);** |
| **11** | **if (x > 5)** |
| **12** | **i += 2;** |
| **13** | **Else** |
| **14** | **i += 3;** |
| **15** | **}** |
| **16** | **sum = sum + i;** |
| **17** | **System.out.println(sum);** |
| **18** | **}** |
| **19** | **}** |

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| **1** | **public class Q18 {** |
| **2** | **public static void main(String[] args) {** |
| **3** | **int x = 0, y =0;** |
| **4** | **int sum = 0;** |
| **5** | **while (x < 10){** |
| **6** | **y = x - 3;** |
| **7** | **y = 40;** |
| **8** | **while (y > 22){** |
| **9** | **if ((sum > 30) && (sum < 40))** |
| **10** | **sum = sum + x \* 3 ;** |
| **11** | **else if ((sum > 40) && (sum < 50))** |
| **12** | **sum = sum + x \* 4;** |
| **13** | **else** |
| **14** | **sum = sum + 24;** |
| **15** | **System.out.println(sum);** |
| **16** | **y = y - 10;** |
| **17** | **}** |
| **18** | **x += 2;** |
| **19** | **}** |
| **20** | **}** |
| **21** | **}** |

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| **1** | **public class Q19 {** |
| **2** | **public static void main(String[] args) {** |
| **3** | **boolean var1 = false, var2 = false, var3 = false, var4 = false,var5 = false;** |
| **4** | **boolean var6 = false, result1 = false, result2 = false, result3 = false, result4 = false;** |
| **5** | **boolean result5 = false, result6 = false, result7 = false, result8 = false;** |
| **6** | **boolean result9 = false, result10 = false;** |
| **7** | **var1 = 4 < 3 - 1;** |
| **8** | **var2 = var1 && false;** |
| **9** | **var3 = false;** |
| **10** | **var4 = true;** |
| **11** | **var5 = false;** |
| **12** | **var6 = var3 && true;** |
| **13** | **result1 = (var1 || var2) && (8 \* 10 > 45);** |
| **14** | **result2 = (var1 || var2) && (result1 && false);** |
| **15** | **result3 = (var1 && result1) || result2;** |
| **16** | **result4 = (var1 || var2) || ((var3 && var1) && false);** |
| **17** | **result5 = (var1 && var2) && (result3 || var1);** |
| **18** | **result6 = ((var3 || var2) && !(result5)) || true;** |
| **19** | **result7 = (var4 && result1) && ((result1 && false) || true);** |
| **20** | **result8 = ((var1 && result3) && (var5 || var6)) && true;** |
| **21** | **result9 = ((result2 && var2) || (result7 && var1)) && false;** |
| **22** | **result10 = !(var1 && true);** |
| **23** | **}** |
| **24** | **}** |

**Show the values of the result variables in the above program:**

|  |  |
| --- | --- |
| **result1** |  |
| **result2** |  |
| **result3** |  |
| **result4** |  |
| **result5** |  |
| **result6** |  |
| **result7** |  |
| **result8** |  |
| **result9** |  |
| **result10** |  |

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| **1** | **public class Q20 {** |
| **2** | **public static void main(String[] args) {** |
| **3** | **int x = 0, y =0;** |
| **4** | **int sum = 0;** |
| **5** | **while (x < 10) {** |
| **6** | **y = x - 3;** |
| **7** | **while (y < 3) {** |
| **8** | **sum = x - y \* 2 ;** |
| **9** | **System.out.println(sum);** |
| **10** | **y = y + 1;** |
| **11** | **}** |
| **12** | **if (x > 7) {** |
| **13** | **x++;** |
| **14** | **} else {** |
| **15** | **x += 3;** |
| **16** | **}** |
| **17** | **}** |
| **18** | **sum = x - y \* 2 ;** |
| **19** | **System.out.println(sum);** |
| **20** | **}** |
| **21** | **}** |

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| **1** | **public class Q21 {** |
| **2** | **public static void main(String[] args) {** |
| **3** | **int x = 0, y =0;** |
| **4** | **int sum = 0;** |
| **5** | **while (x < 10) {** |
| **6** | **y = x - 3;** |
| **7** | **while (y < 3) {** |
| **8** | **sum = x - y \* 3 ;** |
| **9** | **System.out.println(sum);** |
| **10** | **y = y + 1;** |
| **11** | **}** |
| **12** | **if (x > 7) {** |
| **13** | **x++;** |
| **14** | **} else {** |
| **15** | **x += 3;** |
| **16** | **}** |
| **17** | **}** |
| **18** | **sum = x - y \* 3 ;** |
| **19** | **System.out.println(sum);** |
| **20** | **}** |
| **21** | **}** |

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| **1** | **public class Q22 {** |
| **2** | **public static void main(String[] args) {** |
| **3** | **int x = 0, y =0;** |
| **4** | **int sum = 0;** |
| **5** | **while (x < 10) {** |
| **6** | **y = x - 3;** |
| **7** | **y = 40;** |
| **8** | **while (y > 22) {** |
| **9** | **if ((sum > 30) && (sum < 40))** |
| **10** | **sum = sum + x \* 2 ;** |
| **11** | **else if ((sum > 40) && (sum < 50))** |
| **12** | **sum = sum + x \* 3;** |
| **13** | **else** |
| **14** | **sum = sum + 23;** |
| **15** | **System.out.println(sum);** |
| **16** | **y = y - 10;** |
| **17** | **}** |
| **18** | **x += 2;** |
| **19** | **}** |
| **20** | **}** |
| **21** | **}** |

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| **1** | **public class Q23 {** |
| **2** | **public static void main(String[] args) {** |
| **3** | **int x = 0, y = 0;** |
| **4** | **int sum = 0;** |
| **5** | **while (x < 10) {** |
| **6** | **y = x - 3;** |
| **7** | **y = 40;** |
| **8** | **while (y > 22) {** |
| **9** | **if ((sum > 30) && (sum < 40))** |
| **10** | **sum = sum + x \* 3 ;** |
| **11** | **else if ((sum > 40) && (sum < 50))** |
| **12** | **sum = sum + x \* 4;** |
| **13** | **else** |
| **14** | **sum = sum + 24;** |
| **15** | **System.out.println(sum);** |
| **16** | **y = y - 10;** |
| **17** | **}** |
| **18** | **x += 2;** |
| **19** | **}** |
| **20** | **}** |
| **21** | **}** |

|  |  |
| --- | --- |
| **1** | **public class Q24 {** |
| **2** | **public static void main(String[] args) {** |
| **3** | **int x = 0, p = 0, sum = 0;** |
| **4** | **p = 1;** |
| **5** | **x = 2;** |
| **6** | **double q;** |
| **7** | **sum = 0;** |
| **8** | **while (p < 12){** |
| **9** | **q = x + p-(sum+5/3)/3.0%2 ;** |
| **10** | **sum = sum + (x++) + (int)q;** |
| **11** | **System.out.println(sum);** |
| **12** | **if (x > 5)** |
| **13** | **p += 4/2;** |
| **14** | **Else** |
| **15** | **p += 3%1;** |
| **16** | **}** |
| **17** | **sum = sum + p;** |
| **18** | **System.out.println(sum);** |
| **19** | **}** |
| **20** | **}** |

|  |  |
| --- | --- |
| **1** | **public class Q25 {** |
| **2** | **public static void main(String[] args) {** |
| **3** | **int test = 1;** |
| **4** | **int j = 0, k = 100;** |
| **5** | **while (k > 0) {** |
| **6** | **while (j < k ) {** |
| **7** | **test = k + j - 21;** |
| **8** | **System.out.println(1 + test / 2 +"32");** |
| **9** | **j+=10;** |
| **10** | **}** |
| **11** | **k-=10;** |
| **12** | **}** |
| **13** | **}** |
| **14** | **}** |

|  |  |
| --- | --- |
| **1** | **public class Q26 {** |
| **2** | **public static void main(String[] args) {** |
| **3** | **String test = "";** |
| **4** | **inti = 5, j = 0, k = 15;** |
| **5** | **while (i< 10){** |
| **6** | **k -= 1;** |
| **7** | **j = k;** |
| **8** | **while (j > 10 ) {** |
| **9** | **if (j % 2 == 0) {** |
| **10** | **test = "<--";** |
| **11** | **test = test + i + 2 + "-->" + (j / 2);** |
| **12** | **} else {** |
| **13** | **test = "-->";** |
| **14** | **test = "-->" + (i / 2) + test + j;** |
| **15** | **}** |
| **16** | **System.out.println(test);** |
| **17** | **--j;** |
| **18** | **}** |
| **19** | **i++;** |
| **20** | **}** |
| **21** | **}** |
| **22** | **}** |

|  |  |
| --- | --- |
| **1** | **public class Q27 {** |
| **2** | **public static void main(String[] args) {** |
| **3** | **int x = 0, p = 0, sum = 0;** |
| **4** | **p = 1;** |
| **5** | **x = 2;** |
| **6** | **double q;** |
| **7** | **sum = 0;** |
| **8** | **while (p < 12) {** |
| **9** | **q = x + p-(sum+7/3)/3.0%2 ;** |
| **10** | **sum = sum + (x++) + (int)q;** |
| **11** | **System.out.println(sum);** |
| **12** | **if (x > 5)** |
| **13** | **p += 4/2;** |
| **14** | **Else** |
| **15** | **p += 3%1;** |
| **16** | **}** |
| **17** | **sum = sum + p;** |
| **18** | **System.out.println(sum);** |
| **19** | **}** |
| **20** | **}** |

|  |
| --- |
| **public class Q28 {** |
| **public static void main(String[] args) {** |
| **int test = 1;** |
| **int j = 0, k = 100;** |
| **while (k > 0){** |
| **while (j < k ){** |
| **test = k - j + 21;** |
| **System.out.println(1 + test / 2 +"11");** |
| **j+=10;** |
| **}** |
| **k-=10;** |
| **}** |
| **}** |
| **}** |

|  |
| --- |
| **public class Q29 {** |
| **public static void main(String[] args) {** |
| **String test = "";** |
| **int i = 5, j = 0, k = 15;** |
| **while (i< 10){** |
| **k -= 1;** |
| **j = k;** |
| **while (j > 10 ){** |
| **if (j % 2 == 0){** |
| **test = "<--";** |
| **test = test + i + 3 + "-->" + (j / 3);** |
| **}else{** |
| **test = "-->";** |
| **test = "-->" + (i / 3) + test + j ;** |
| **}** |
| **System.out.println(test);** |
| **--j;** |
| **}** |
| **i++;** |
| **}** |
| **}** |
| **}** |

|  |
| --- |
| **public class Q30 {** |
| **public static void main(String[] args) {** |
| **String test = "";** |
| **int i = 0, j = 0, k = 15;** |
| **test = "<--cat";** |
| **while (i< 5){** |
| **k-=1;** |
| **j = k;** |
| **while (j > 10 ){** |
| **if (j % 2 == 0){** |
| **test += "-->";** |
| **test = test + i + (j / 2);** |
| **}else{** |
| **test += "<--";** |
| **test = test + (i / 2) + j;** |
| **}** |
| **System.out.println(test);** |
| **--j;** |
| **}** |
| **i++;** |
| **}** |
| **}** |
| **}** |

|  |
| --- |
| **public class Quiz31 {** |
| **public static void main(String[] args) {** |
| **String test = "";** |
| **int i = 2, j = 0, k = 17;** |
| **test = "-->dog";** |
| **while (i< 7){** |
| **k-=1;** |
| **j = k;** |
| **while (j > 12 ){** |
| **if (j % 2 == 0){** |
| **test += "<--";** |
| **test = test + i + (j / 2);** |
| **}else{** |
| **test += "-->";** |
| **test = test + (i / 2) + j;** |
| **}** |
| **System.out.println(test);** |
| **--j;** |
| **}** |
| **i++;** |
| **}** |
| **}** |
| **}** |

|  |
| --- |
| **public class Q32 {** |
| **public static void main(String[] args) {** |
| **int x = 0, y = 0;** |
| **int sum = 0;** |
| **double p;** |
| **while (x < 10) {** |
| **y = x / 2;** |
| **while (y < x) {** |
| **p = (x + 10.0) / 2;** |
| **sum = (sum % 2) + x - y \* 2 + (int) p ;** |
| **System.out.println(sum);** |
| **y = y + 2;** |
| **}** |
| **if (x > 5) {** |
| **x++;** |
| **} else {** |
| **x += 2;** |
| **}** |
| **}** |
| **}** |
| **}** |

|  |
| --- |
| **public class Q33 {** |
| **public static void main(String[] args) {** |
| **int x = 0, y =0;** |
| **int sum = 0;** |
| **double p;** |
| **while (x < 10) {** |
| **y = x / 2;** |
| **while (y < x) {** |
| **p = (x + 5.0) / 2;** |
| **sum = (sum % 2) + x - y \* 2 + (int) p ;** |
| **System.out.println(sum);** |
| **y = y + 2;** |
| **}** |
| **if (x > 5) {** |
| **x++;** |
| **} else {** |
| **x += 2;** |
| **}** |
| **}** |
| **}** |
| **}** |

|  |
| --- |
| **public class Q34 {** |
| **public static void main(String[] args) {** |
| **int x = 0, p = 0, sum = 0;** |
| **p = 1;** |
| **x = 2;** |
| **double q;** |
| **sum = 0;** |
| **while (p < 12){** |
| **q = x + p-(sum+5/3)/3.0%2 ;** |
| **sum = sum + (x++) + (int)q;** |
| **System.out.println(sum);** |
| **if (x > 5)** |
| **p += 4/2;** |
| **Else** |
| **p += 3%1;** |
| **}** |
| **sum = sum + p;** |
| **System.out.println(sum);** |
| **}** |
| **}** |

|  |
| --- |
| **public class Q35 {** |
| **public static void main(String[] args) {** |
| **int test = 1;** |
| **int j = 0, k = 100;** |
| **while (k > 0){** |
| **while (j < k ){** |
| **test = k + j - 21;** |
| **System.out.println(1 + test / 2 +"32");** |
| **j+=10;** |
| **}** |
| **k-=10;** |
| **}** |
| **}** |
| **}** |

|  |
| --- |
| **public class Q36 {** |
| **public static void main(String[] args) {** |
| **String test = "";** |
| **inti = 5, j = 0, k = 15;** |
| **while (i< 10) {** |
| **k-=1;** |
| **j = k;** |
| **while (j > 10 ) {** |
| **if (j % 2 == 0) {** |
| **test = "<--";** |
| **test = test + i + 2 + "-->" + (j / 2);** |
| **} else {** |
| **test = "-->";** |
| **test = "-->" + (i / 2) + test + j;** |
| **}** |
| **System.out.println(test);** |
| **--j;** |
| **}** |
| **i++;** |
| **}** |
| **}** |
| **}** |

|  |
| --- |
| **public class Q37 {** |
| **public static void main(String[] args) {** |
| **boolean var1 = false, var2 = false, var3 = false, var4 = false,var5 = false;** |
| **boolean var6 = false, result1 = false, result2 = false, result3 = false, result4 = false;** |
| **boolean result5 = false, result6 = false, result7 = false, result8 = false;** |
| **boolean result9 = false, result10 = false;** |
| **var1 = (!true || true) && false;** |
| **var2 = var1 && false;** |
| **var3 = true && !false;** |
| **var4 = false;** |
| **var5 = true;** |
| **var6 = var3 && false;** |
| **result1 = (var1 && var2) && ( 40 % 3 > 45) || (var5 && var6);** |
| **result2 = (var1 || var2) || (result1 && false);** |
| **result3 = (var1 && result1) || result2 || var5;** |
| **result4 = (var1 || var2) || ((var3 && var1) && false);** |
| **result5 = (var1 && var2) && (result3 || var1);** |
| **result6 = ((var3 || !var2) && (result5)) || true;** |
| **result7 = (var4 && result1) && ((result1 && false) || true);** |
| **result8 = ((var1 && result3) && (!var5 || var6)) && true;** |
| **result9 = ((result2 && var2) || (!result7 && var1)) && !false;** |
| **result10 = !(var1 && true);** |
| **}** |
| **}** |

**Show the values of the result variables in the above program:**

|  |  |
| --- | --- |
| **result1** |  |
| **result2** |  |
| **result3** |  |
| **result4** |  |
| **result5** |  |
| **result6** |  |
| **result7** |  |
| **result8** |  |
| **result9** |  |
| **result10** |  |

|  |
| --- |
| **public class Q38 {** |
| **public static void main(String[] args) {** |
| **int x = 0, p =0, sum = 0;** |
| **p = 1;** |
| **x = 2;** |
| **double q;** |
| **sum = 0;** |
| **while (p < 12) {** |
| **q = x + p-(sum+7/3)/3.0%2 ;** |
| **sum = sum + (x++) + (int)q;** |
| **System.out.println(sum);** |
| **if (x > 5)** |
| **p += 4/2;** |
| **Else** |
| **p += 3%1;** |
| **}** |
| **sum = sum + p;** |
| **System.out.println(sum);** |
| **}** |
| **}** |

|  |
| --- |
| **public class Q39 {** |
| **public static void main(String[] args) {** |
| **int test = 1;** |
| **int j = 0, k = 100;** |
| **while (k > 0) {** |
| **while (j < k ) {** |
| **test = k - j + 21;** |
| **System.out.println(1 + test / 2 +"11");** |
| **j+=10;** |
| **}** |
| **k-=10;** |
| **}** |
| **}** |
| **}** |

|  |
| --- |
| **public class Q40 {** |
| **public static void main(String[] args) {** |
| **String test = "";** |
| **Int i = 5, j = 0, k = 15;** |
| **while (i< 10) {** |
| **k-=1;** |
| **j = k;** |
| **while (j > 10 ) {** |
| **if (j % 2 == 0) {** |
| **test = "<--";** |
| **test = test + i + 3 + "-->" + (j / 3);** |
| **} else {** |
| **test = "-->";** |
| **test = "-->" + (i / 3) + test + j ;** |
| **}** |
| **System.out.println(test);** |
| **--j;** |
| **}** |
| **i++;** |
| **}** |
| **}** |
| **}** |

|  |
| --- |
| **public class Q41 {** |
| **public static void main(String[] args) {** |
| **boolean var1 = false, var2 = false, var3 = false, var4 = false,var5 = false;** |
| **boolean var6 = false, result1 = false, result2 = false, result3 = false, result4 = false;** |
| **boolean result5 = false, result6 = false, result7 = false, result8 = false;** |
| **boolean result9 = false, result10 = false;** |
| **var1 = (!false || false) && true;** |
| **var2 = var1 && true;** |
| **var3 = false && !true;** |
| **var4 = true;** |
| **var5 = false;** |
| **var6 = var3 && true;** |
| **result1 = (var1 && var2) && ( 40 % 3 > 45) || (var5 && var6);** |
| **result2 = (var1 || var2) || (result1 && false);** |
| **result3 = (var1 && result1) || result2 || var5;** |
| **result4 = (var1 || var2) || ((var3 && var1) && false);** |
| **result5 = (var1 && var2) && (result3 || var1);** |
| **result6 = ((var3 || !var2) && (result5)) || true;** |
| **result7 = (var4 && result1) && ((result1 && false) || true);** |
| **result8 = ((var1 && result3) && (!var5 || var6)) && true;** |
| **result9 = ((result2 && var2) || (!result7 && var1)) && !false;** |
| **result10 = !(var1 && true);** |
| **}** |
| **}** |

**Show the values of the result variables in the above program:**

|  |  |
| --- | --- |
| **result1** |  |
| **result2** |  |
| **result3** |  |
| **result4** |  |
| **result5** |  |
| **result6** |  |
| **result7** |  |
| **result8** |  |
| **result9** |  |
| **result10** |  |

|  |
| --- |
| **public class Q42 {** |
| **public static void main(String[] args) {** |
| **String test = "";** |
| **int i = 0, j = 0, k = 15;** |
| **test = "<--cat";** |
| **while (i< 5){** |
| **k-=1;** |
| **j = k;** |
| **while (j > 10 ) {** |
| **if (j % 2 == 0) {** |
| **test += "-->";** |
| **test = test + i + (j / 2);** |
| **} else {** |
| **test += "<--";** |
| **test = test + (i / 2) + j;** |
| **}** |
| **System.out.println(test);** |
| **if (j == 12) {** |
| **test = "<--cat";** |
| **}** |
| **--j;** |
| **}** |
| **i++;** |
| **}** |
| **}** |
| **}** |

|  |
| --- |
| **public class Q43 {** |
| **public static void main(String[] args) {** |
| **String test = "";** |
| **int i = 2, j = 0, k = 17;** |
| **test = "-->dog";** |
| **while (i< 7) {** |
| **k-=1;** |
| **j = k;** |
| **while (j > 12 ) {** |
| **if (j % 2 == 0) {** |
| **test += "<--";** |
| **test = test + i + (j / 2);** |
| **} else {** |
| **test += "-->";** |
| **test = test + (i / 2) + j;** |
| **}** |
| **System.out.println(test);** |
| **if (j == 14) {** |
| **test = "-->dog";** |
| **}** |
| **--j;** |
| **}** |
| **i++;** |
| **}** |
| **}** |
| **}** |

|  |
| --- |
| **public class Q44 {** |
| **public static void main(String[] args) {** |
| **int x = 0, y =0;** |
| **int sum = 0;** |
| **double p;** |
| **while (x < 10) {** |
| **y = x / 2;** |
| **while (y < x) {** |
| **p = (x + 10.0) / 2;** |
| **sum = (sum % 2) + x - y \* 2 + (int) p ;** |
| **System.out.println(sum);** |
| **y = y + 2;** |
| **}** |
| **if (x > 5) {** |
| **x++;** |
| **} else {** |
| **x += 2;** |
| **}** |
| **}** |
| **}** |
| **}** |

|  |
| --- |
| **public class Q45 {** |
| **public static void main(String[] args) {** |
| **int x = 0, y =0;** |
| **int sum = 0;** |
| **double p;** |
| **while (x < 10) {** |
| **y = x / 2;** |
| **while (y < x) {** |
| **p = (x + 5.0) / 2;** |
| **sum = (sum % 2) + x - y \* 2 + (int) p ;** |
| **System.out.println(sum);** |
| **y = y + 2;** |
| **}** |
| **if (x > 5) {** |
| **x++;** |
| **} else {** |
| **x += 2;** |
| **}** |
| **}** |
| **}** |
| **}** |