```
Output Questions
              public class Test {
1.
                   public static void main(String[]
                   System.out.println(System.out.println("hi"));
Answer:
              void type error
Explation:
              The return type of
                                   System.out.println is void type
              means it return nothing
2.
              public class Test {
                   public static void main(String[] args) {
                   int a, b, c;
                   a=-3+2*7-4;
                   b=a*8+4%5-6;
                   c=a+b*3-2%5-4;
                   System.out.println(a+" "+b+" "+c);
                   54
                         163
Answer:
Explanation:
              Simple Arithmetic operations
3.
              public class Test {
                   public static void main(String[] args) {
                   int a=2, b=5, c;
                   a=a*a++ - --a;
                   c=b++ - b--;
                   System.out.println("a="+a+", b="+b+", c="+c);
                   System.out.println(a+++++a * a--);
                   System.out.println(b=b++ * b--);
                   System.out.println("a="+a+", b="+b+", c="+c);
              }
              a=2, b=5, c=-1
Answer:
              18
              30
              a=3, b=30, c=-1
              Explanation: Apply the rule for increment or decrement
Explanation:
              operators.
              public class Test {
4.
                   public static void main(String[] args)
                   System.out.print(011+ 1.94 + "C" + "S");
Answer:
              10.94CS
              011 is octal so first converted to decimal so it is 9.
Explanation:
              Then 9+1.94=10.94 then concatenation CS. So 10.94CS
5.
              public class Test {
```

```
public static void main(String[] args)
                  System.out.println(2+3+"bc"+'c'+'a');
                  System.out.println('c'+'a'+2+3+"bc");
                  System.out.println("bc"+'c'+'a'+2+3);
                  System.out.println("bc"+('c'+'a')+(2)+3);
             5bcca
Answer:
             201bc
             bcca23
             bc19623
             : Apply the rule of concatenation and ASCII value of
Explanation:
             characters.
             public class Test {
6.
                  public static void main(String[] args) {
                  int x = -4;
                  System.out.println(x>>1);
                  int y = 4;
                  System.out.println(y>>1);
             }
Answer:
             - 2
             2
Explanation:
                 binary before right shift
             11111111111111111111111111111100
                 after right shift binary is
             binary before right shift 100
                after right shift binary is 10
7.
             public class Test {
                  public static void main(String[] args)
                  System.out.println(10 + 15 + "Hello");
                  System.out.println("Hello" + 10 + 15);
             25Hello
Answer:
             Hello1015
Explanation:
             In the given expressions 10 + 15 + "Hello" and
             "Hello" + 10 + 15 , there are two + operators, so we
             check for associatively. The + operator is left to
             right. So the first expression is evaluated as (10 +
             15) + "Hello" and second expression is evaluated as
             ("Hello" + 10) + 15.
             public class Test {
8.
                  public static void main(String[] args) {
                  byte b = 10;
                  b = b + 10;
                  System.out.println(b);
```

```
incompatible types: possible lossy conversion from
Answer:
              int to byte
Explanation:
              Normal assignment operator are used. Here assignment
              of an int (b+1=20) value to byte variable (i.e. b) is
              done for which the result is in compile time error. So
              type-casting (b=(byte)(b+10)) is done to get the
              result.
9.
               public class Test {
                   public static void main(String[] args) {
                 int i = 4;
                 int j = 21;
                 int k = ++i * 7 + 2 - j--;
                 System.out.println("k = " + k);
              }
              16
Answer:
              k=5*7+2-21 and the evaluation will done by left to
Explanation:
              right.
              k=16.
10.
              public class Test {
                   public static void main(String[] args) {
                     int a = 2;
                     int b = 3;
                     int result = a && b;
                     System.out.println(result);
                    }
               }
Answer:
              Compilation error
              The operator && is undefined for the argument type(s)
Explanation:
              int, int
11.
              public class Test {
                   public static void main(String[] args) {
                   int x=-5;
                   System.out.println(~x);
                        }
Answer:
              5=0000----0101
Explanation:
              1's Complement(5)=1111----1010
              -5=2's Complement(5)=1111----1011
              1's Complement(-5)=0000----0100
              =4
```

```
public class Test {
12.
                  public static void main(String[] args) {
                  int x=Integer.MAX_VALUE;
                  System.out.println(x>>28);
                       }
               }
              7
Answer:
Explanation:
              x=0111----1111
               x>>28=0000----0111
               =7
13.
              public class Test {
                  public static void main(String[] args) {
                  int x=10, y=5;
                  System.out.println(x+++++y|(x=y)&101);
                   }
             12
Answer:
Explanation:
             Use operator precedence table
14.
              public class Test {
                  public static void main(String[] args) {
                  int x=-4, y=4;
                  System.out.println((x>>30)+" "+(x>>30)+" "+
              (y>>1));
                       }
             3 -1 2
Answer:
Explanation:
                  -4=1111----1100
                  -4>>>30=0000----0011
                 =3
                  -4=1111----1100
              -4>>30=1111-----1111 (negative number so preserve sign
              (-))
             1's Comp(-4>>30)=0000----0000
              2's Comp(-4>>30)=0000----0001
                                         =1
                         Answer=-1
              public class Test {
15.
             public static void main(String[] args) {
                  int x=5;
                  int y=x+++++x+++x;
                  int z=--y + x++ + y++;
                  int p=z++ - (z\%10) + (p=z);
                  System.out.println(x+""+y+""+z+""+p);
                   }
```

```
Answer:
              9 20 47 86
              Use operator precedence table.
Explanation:
16.
              public class OperatorEx1 {
                   public static void main(String args[]){
                   int x=10;
                   System.out.println(x++);
                   System.out.println(++x);
                   System.out.println(x--);
                   System.out.println(--x);
              10
Answer:
              12
              12
              10
Explanation:
17.
              public class OperatorEx2 {
                   public static void main(String args[]){
                   int a=10;
                   int b=10;
                   System.out.println(a+++++a);//10+12=22
                   System.out.println(b+++b++);//10+11=21
              22
Answer:
              21
Explanation:
18.
              public class OperatorEx3 {
                   public static void main(String args[]){
                   System.out.println(10<<2);</pre>
                   System.out.println(10<<3);
                   System.out.println(20<<2);
                   System.out.println(15<<4);
              40
Answer:
              80
              80
              240
Explanation:
19.
              public class OperatorEx4 {
                   public static void main(String args[]){
                   System.out.println(10>>2);
                   System.out.println(20>>2);
                   System.out.println(20>>3);
                   }
              2
Answer:
```

```
5
              2
Explanation:
20.
               public class OperatorEx5{
                    public static void main(String args[]){
                    int a=10;
                    int b=5;
                    int c=20;
                    System.out.println(a < b \&\& a < c);
                    System.out.println(a < b & a < c);
               false
Answer:
               false
Explanation:
21.
               public class OperatorEx6{
                    public static void main(String args[]){
                    int a=10;
                    int b=5;
                    int c=20;
                    System.out.println(a < b\&a++ < c);
                    System.out.println(a);
                    System.out.println(a < b\&a++ < c);
                    System.out.println(a);
Answer:
               false
               10
               false
               11
Explanation:
22.
               public class OperatorEx7{
                    public static void main(String args[]){
                    int a=10;
                    int b=6;
                    int c=30;
                    System.out.println(a > b \mid\mid a < c);
                    System.out.println(a > b \mid a < c);
                    System.out.println(a > b \mid\mid a++ < c);
                    System.out.println(a);
                    System.out.println(a > b \mid a ++ < c);
                    System.out.println(a);
Answer:
               true
               true
               true
               10
               true
```

```
11
Explanation:
23.
              public class Test{
                   public static void main(String args[]){
                   int a=4;
                   int b=5;
                   int x=(a++ < b)?a:b;//5:5
                   int y=a+b-x;
                   System.out.println("x="+x);
                   System.out.println("y="+y);
              x=5
Answer:
              y=5
Explanation:
24.
              public class OperatorEx9{
                   public static void main(String[] args){
                   int a=10;
                   a+=3;
                   System.out.println(a);
                   a-=4;
                   System.out.println(a);
                   a*=2;
                   System.out.println(a);
                   a/=2;
                   System.out.println(a);
              13
Answer:
              9
              18
              9
Explanation:
25.
              public class IntegerConversion{
                   public static void main(String args[]){
                   long 1 = 55;
                   int i = 44;
                   short s = 33;
                            = 22;
                   byte b
                   i = (int) 1;
                   s = (short) i;
                   b = (byte) s;
                   System.out.println("l = " + 1);
                   System.out.println("i = " + i);
                   System.out.println("s = " + s);
                   System.out.println("b = " + b);
                   }
              1 = 55
Answer:
```

```
i = 55
              s = 55
              b = 55
Explanation:
26.
              public class Conversion2 {
                   public static void main(String args[]) {
                   int i = 132;
                   short s = 15;
                   byte b = (byte) i;
                   int x = b + s;
                   System.out.println("Value of x is " + x);
                   }
              Value of x is -109
Answer:
Explanation:
              public class IntegerGroupAddition{
27.
                   public static void main(String args[]){
                   long 1 = 30;
                   int i = 50;
                   short s = 60;
                   byte b = 70;
                   byte sum = (byte)(1 + i + s + b);
                   System.out.println("Sum = " + sum);
                   }
              Sum = -46
Answer:
Explanation:
28.
              Public class demo1{
                   public static void main(String args[]){
                   byte y=5, z=-y;
                   System.out.println(~y);
                   System.out.println(~z);
                   y\&= \sim y;
                   System.out.println(y);
                   byte x = -1;
                   System.out.println(x>>>6);
                   byte a=-5, b=-6;
                   System.out.println(a|b);
Answer:
              -6
              4
              67108863
Explanation:
              X is stored using 8 bit 2's complement form.
              Binary representation of -1isall1s (11111111)
              The value of 'x>>>6'is 00000011
```

```
29.
              Public class demo2{
                   public static void main(String args[]) {
                   System.out.println(2!=3 \&\& (7>8 || 6>5));
                   System.out.println(!(2!=3) && (7>8 || 6>5 ));
              System.out.println(3==3 \&\& z>=10));
                   System.out.println(2!=3 && (7>8 || 6>5 ));
Answer:
              truefalsetruetrue
Explanation:
              Public class demo3{
30.
                   public static void main(String args[]) {
                   int v=10;
                   System.out.println(v\%=3*4);int x=11;
                   System.out.println(-x- -); System.out.println(x);
                   x = -x - -;
                   System.out.println(x); int y = -x - -;
                   System.out.println(x+""+y);
              10
Answer:
              -11
              10
              -10
              -11 10
Explanation:
31.
              Public class demo4{
                    public static void main(String args[]) {
                   int x=-11;
                   System.out.println(x%2);
                   System.out.println(x/2);
Answer:
              -1
              - 5
Explanation:
32.
              FIND Errors
              Public class demo5{
                   public static voidmain(String args[]) {
                   int 1stnum=10, nu-m2=20, 3rd num=40;
                   System.out.println("/"hello/"");
                   byte b=128; float c=2.1; charc='a'; char cc=20;
                   System.out.println(cc);
                   }
Answer:
              errors
              1stnum, nu-m2 and3rd numare not valid variable names
Explanation:
```

```
Instead of /"hello/"wehave to write \"hello\"
              For bytetype variable the maximum value is 127 so it
              can't store value larger than 127
              c is float type. It can't store adouble value.
              In the statementcharc=20 there is an error. The namec
              has been used again for declaring acharacter variable.
              In the lasttwo statements there is noerror.
              public class Test
33.
                 public static void main(String[] args)
                    int a = 10;
                    System.out.println(a++++);
                 }
              }
Answer:
              Compilation Error
              It is evaluated as 10++; variable is required to
Explanation:
              perform ++ operator. Performing ++ on 10 is
              compilation error.
34.
              public class Test
                 public static void main(String[] args)
                    int a=2;
                    int b=4;
                    System.out.println("value of a XOR B:"+(a^b));
                 }
              }
              value of a XOR B in Java : 6
Answer:
Explanation:
              0010^0100=6
35.
              public class Test
                 public static void main(String[] args)
                    int a = 10;
                    if(++a==11 || ++a==12)
                         ++a;
                     System.out.println(a);
                  }
              }
              12
Answer:
```

```
Explanation:
              11==11||11==12
              12
              in logical or if first condition is true it will not
              check the second condition so first a will be 11 and
              then 12
              public class Test
36.
                  public static void main(String s[])
                     int a, b, result;
                      a=10; b=20;
                     result=(b>=a);
                    System.out.println(result);
                  }
              }
Answer:
              Error: Incompatible type
              The Expression result=(b>=a); here value of b is
Explanation:
              largest from a, True will return, and true (boolean )
              can not assign into integer variable.
              public class Test
37.
                 public static void main (String[] args)
                      int x=20;
                     String sup = (x < 15) ? "small" : (x < 22)?
                                                 "tiny" : "huge";
                      System.out.println(sup);
                 }
               }
Answer:
              tiny
              This is an example of a nested ternary operator. The
Explanation:
              second evaluation
               (x < 22) is true, so the "tiny" value is assigned to
              sup.
38.
              public class Alpha
                 public static void main(String args[])
                 {
                   int a=12+21*3-9/2;
                   int b=14-32*4+175/8-3;
                       boolean p=(++a>71&&--b<20);
                            System.out.println(p);
                       boolean p1=(b--==-99 \mid | a-- > 100);
                            System.out.println(p1);
```

```
}
              }
Answer:
              true
              false
Explanation:
39.
               public class Alpha
                  public static void main(String[] args)
                  {
                         char a = 'A'
                        System.out.println(++a +" "+ (int)a++);
                  }
              B 66
Answer:
Explanation:
40.
               public class Alpha
                  public static void main(String[] args)
                  {
                       float x=5.3f;
                       boolean p=(x==5.3);
                          System.out.println(p);
                  }
               }
Answer:
              False
Explanation:
41.
               public class Alpha
                   public static void main(String[] args)
                            int temp = 9;
                             int data = 8;
                       System.out.println(temp & data);
                       System.out.println(temp | data);
                       System.out.println(temp ^ data);
                   }
               }
Answer:
               8
               9
               1
Explanation:
42.
               public class Alpha
               public static void main(String[] args)
```

```
double d1 = 123.456;
                     double d2 = 12_3.4_5_6;
                    double d3 = 12_3.4_56;
                    System.out.println(d1);
                    System.out.println(d2);
                    System.out.println(d3);
              }
             123,456
Answer:
             123.456
             123,456
             we can use '_'(under Score) Symbol between digits of
Explanation:
             numeric literals according to java naming conventions.
43.
             public class Test1 {
                 public static void main(String[] args) {
                      int x = 7;
                       int y = 4;
                      x+=4/3+x--+y+++x+++y--;
                       System.out.print("x ="+x);
                       System.out.print("y ="+y);
                 }
Answer:
             x = 30 y = 4
             It can be seen that, in line no. 5 and 6 the variables
Explanation:
                            initialized
                                        by the values
                       are
                                                        7
                                                           and
             respectively. Now, the expression given in line no. 7
             has the following operators: +=, /, +, post increment,
             and post decrement. Following the precedence table,
             among the available operators both the post increment
             and post decrement are having the highest precedence.
             However, post increment and post decrement are having
             the same precedence, so due to this reason we will
             look for the associatively property in this case. As
             we know that, the post increment and post decrement
             operators have the associatively from left to right.
             Applying
                       this
                             information
                                          to
                                              the
                                                   aforementioned
             5. Next, the = operator will be executed and will
             result in x+ = 1 + 7 + 4 + 6 + 5. After this, the +
```

```
operator will be executed, and it can be seen that as
                  have
                         multiple
                                  + operators,
                                                    following
                                                                the
             associatively property, the execution will go from
             left to right. So, we can write x+=23. and finally +
             = operator will be executed. It can be written as x =
             x+23. The current value of x is 7 and y is 4,
             finally 30 will be stored in x and 4 will be stored in
             у.
             public class Test2
44.
                  public static void main(String[] args)
                       int a, b = 10;
                        a = -b --;
                        System.out.println("a ="+a);
                        System.out.println("b ="+b);
                  }
             a = -10
Answer:
             h = 9
Explanation:
             In line no. 5 the variables a is declared and variable
             b is declared and initialized with value 10. The
             expression given in line no. 6 has the following
             operators: =, - (unary), and - (Post decrement).
             Following the precedence table, among the available
             operators the post decrement operator is having the
             highest precedence, then unary and then the assignment
             operator (=). Following this information, the above
             expression can be rewritten as a = -(b--) and results
             in a = -(10). So, -10 will be assigned to a and 9 will
             be assigned to b.
             Which of the following are the legal identi_ers:
45.
             (a) int a;
             (b) int :b;
             (c) int ____2_w;
             (d) int e#;
             (e) int
             this_is_a_very_detailed_name_for_an_identifier;
             (f) int $c;
             (g) int -d;
             (h) int -$;
             (i) int .f;
             (j) int 7g;
             Legal Identi_ers: a, c, d, e, and h.
Answer:
             Illegal Identi_ers: b, f, g, i, and j.
             As we know that the identifiers are the sequence of
Explanation:
```

```
characters that consists of letters, digits,
              underscores (_ ), and dollar signs ($). An identifier
              must start with a letter, an underscore (_ ), or a
              dollar sign ($). It cannot start with a digit.
              public class Test3 {
46.
                  public static void main(String[] args)
                       int i = 1;
                       byte b = i;
                       System.out.print("b ="+b);
                  }
              }
Answer:
              Error: possible loss of precision
              Test3.java:5: possible loss of precision
              found : int
              required: byte
              To assign a variable of the int type to a variable of
Explanation:
              the short or
              byte type, explicit casting must be used.
              public class Test4
47.
              {
                   public static void main(String[] args)
                        int a = 4, b=2;
                         a*=a/b;
                         System.out.print("a ="+a);
                         System.out.print("b ="+b);
                   }
              }
Answer:
              a = 8 b = 2
48.
              public class Alpha
              {
                 public static void main(String[] args)
                     int x = 5;
                     x = x << 3 + 2
                     System.out.println( " x = " + x );
                  }
              160
Answer:
Explanation:
49.
              public class Alpha
```

```
public static void main(String[] args)
                     int x = 5;
                     boolean r = x < 2 \&\& ++x > 4;
                    System.out.println("r = " + r + " x
                                                       + x );
                   }
Answer:
              false
                     5
Explanation:
50.
              In which format -ve numbers are represented in
              computer memory ?
              a) 1's Complement format
              b) 2' Complement format
              c) Original binary equivalent of the number
              d) none of the above
Answer:
              b) 2' Complement format
Explanation:
              public class increment
51.
                 public static void main(String args[])
                    double var1 = 1+5;
                    double var2 = var1/4;
                    int var3 = 1+5;
                    int var4 = var3/4;
                    System.out.print(var2 + " "+ var4);
                 }
Answer:
              1.5
                    1
Explanation:
              public class p1 {
52.
                   public static void main(String[] args)
                        int a=10, b=9;
                        boolean k;
                        k=(a<b) && (++b==a);
                        System.out.println(b);
```

```
}
              }
              9
Answer:
              Because first expression is false so second expression
Explation:
              will not not evaluate that is called concept of short
              circuit.
              public class p2 {
53.
                   public static void main(String[] args)
                   {
                         final int a = 10;
                         int b = ++a;
                         System.out.println(b);
                   }
              }
              Error
Answer:
              Final value cannot be changed
Explanation:
54.
              public class p3 {
                   public static void main(String[] args)
                   {
                        System.out.println((10|5)+"-"+(10|6));
                   }
              }
              15-14
Answer:
              Using Binary (1010|0101 = 1111 = 15) and 10|6 = Using
Explanation:
              Binary (1010|0110 = 1110 = 14)
              public class p4 {
55.
                   public static void main(String[] args)
                         String s1 = "ITER";
                         String s2 = "ITER";
                         System.out.println("s1 == s2 is:" + s1 ==
              s2);
                    }
```

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false
Answer:
              The output is "false" because in java + operator
Explation:
              precedence is more than == operator. So the given
              expression will be evaluated to "s1 == s2 is:ITER" ==
              "ITER" i.e false.
56.
              public class p5 {
                   public static void main(String[] args)
                   {
                        int x = -1;
                        System.out.println(x>>>29);
                         System.out.println(x>>>30);
                         Systemout.println(x>>>31);
                   }
              }
              7
Answer:
              3
              1
              X is stores in 32 bits in form of 2's complement. i.e
Explanation:
              all bits are 11111...111
              public class p6 {
57.
                   public static void main(String[] args)
                   {
                                       // Line 5
                        byte x=127;
                                       // Line 6
                        x = x << 3;
                        System.out.println(x);
                   }
Answer:
              Error at Line 6: incompatible types: possible lossy
              conversion from int to byte
                   Because, the shift operation always assume
Explanation:
                   integer variable as its operand, and, an integer
                   variable can't be stored in a byte variable.
              public class p7 {
58.
                   public static void main(String[] args)
                   {
                        int x=127, y=128;
                        x = (x \& 3) | y;
                        System.out.println(x);
                   }
              }
              131
Answer:
                   The value of x = 127 and y = 128 are represented
Explation:
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in Binary form. Then (x & 3) is computed and then
                   bitwise-OR operation is performed with the result
                   of (x \& 3). Then, the binary resultant is
                   converted to decimal and stored in x and then
                   displayed.
              public class p8 {
59.
                   public static void main(String[] args)
                   {
                        int x=9, y=0;
                        System.out.println((++x)==10 && (++y)==1);
                   }
              true
Answer:
                   Initially, the ++x is computed, i.e., 10 and ++y
Explanation:
                   is computed, i.e., 1. Since, both the conditions
                   are true, the answer is true.
              public class p9 {
60.
                   public static void main(String[] args)
                   {
                        int x=127; // Line 5
                        x+= (x << 3); // Line 6
                        System.out.println(x);
                   }
              }
              1143
Answer:
                   The expression at Line 6 will be expanded as
Explanation:
                   follows: x = x + (x <<3). So, initially the x <<3
                   is computed and then added with x to obtain the
                   final resultant. This resultant will be again
                   convert from binary to decimal and stored in x
                   for
                        displaying.
              public class p10 {
61.
                   public static void main(String[] args)
                   {
                        int x=12, y=7, z=9; // Line 5
                        z = (x < y)? (x > z ? z: x) : (y < z ? z: y);
                        System.out.println(z);
                   }
              }
              9
Answer:
                   The condition x < y is true, this means, the
Explation:
```

```
expression (x > z ? z : x) will execute. Again,
                   the condition x > z is true, which means, z = z.
                   Therefore, z will display 9.
62.
              public class p11 {
                   public static void main(String[] args)
                      int ++a=100;
                      System.out.println(a++);
                   }
              }
              Syntax Error
Answer:
                   Compiler displays error as ++a is not a valid
Explanation:
                   identifier
              public class p12 {
63.
                   public static void main(String[] args)
                      int x = 100;
                      double y = 100.1;
                      boolean b = (x=y); //Line 7
                      System.out.println(b);
                   }
              }
               Compilation fails (Syntax error)
Answer:
              The code will not compile because in line 7, the line
Explanation:
                           only if
                    work
                                     we
                                           use(x==y)
                                                       in
                                                           the
              The==operator compares values to produce a boolean,
              whereas the=operator assigns a value to variables.
              With x = 0, which of the following are legal lines of
64.
              Java code for changing the value of x to 1?
               1. X++;
               2. x=x+1;
               3. x+=1;
                4.
                     x = +1;
               All lines are legal
Answer:
              Operator ++ increases value of variable by 1. x = x +
Explation:
              1 can also be written in shorthand form as x += 1.
              Also x = +1 will set the value of x to 1.
              public class p14 {
65.
                   public static void main(String[] args)
```

```
int x;
                      System.out.println(x);
                   }
              compiler error
Answer:
              Unlike class members, local variables of methods must
Explanation:
              be assigned a value to before they are accessed, or it
              is a compile error.
              public class p15 {
66.
                   public static void main(String[] args)
                         double a, b, c;
                         a = 3.0/0;
                         b = 0/4.0;
                         c=0/0.0;
                         System.out.println(a);
                         System.out.println(b);
                         System.out.println(c);
                   }
              Infinity
Answer:
              0.0
              NaN
              For floating point literals, we have constant value to
Explanation:
              represent (3.0/0) infinity either positive or negative
              and also have NaN (not a number for undefined like
              0/0.0), but for the integral type, we don't have any
              constant that's why we get an arithmetic exception.
              public class p16 {
67.
                   public static void main(String[] args)
                     // the line below this gives an output
                     // \u000d System.out.println("comment
              executed");
                   }
              }
              comment executed
Answer:
              The reason for this is that the Java compiler parses
Explation:
```

```
the unicode character \u000d as a new line and gets
              transformed into:
              public class prog16 {
                 public static void main(String[] args)
                    // the line below this gives an output
                    // \u000d
                    System.out.println("comment executed");
              }
              public class p17 {
68.
                   public static void main(String[] args)
                        int $ = 5;
                          System.out.println($_);
                   }
              }
              5
Answer:
              It looks like $ will cause an error, but it won't. In
Explanation:
              java, identifier rule says, identifier can start with
              any alphabet or underscore ("_") or dollar ("$"). So
              answer is 5.
              public class p18 {
69.
                   public static void main(String[] args)
                   {
                      String s1 = "abc";
                      String s2 = s1;
                      s1 += "d";
                      System.out.println(s1+""+s2+""+(s1 == s2));
                   }
              abcd abc false
Answer:
              In Java, String is immutable. So string s2 and s1 both
Explanation:
              pointing to the same string abc. And, after making the
              changes the string s1 points to abcd and s2 points to
              abc, hence false.
```

```
public class p19 {
70.
                   public static void main(String[] args)
                        int a = 5;
                         System.out.println(a>>33);
                   }
              }
              2
Answer:
              Modulo reduction is applied to the right hand operand
Explation:
              based on the width of the left hand operand.
              given: 1 (shift operation) r
              If l is an int (32 bits) r is reduced to (r \% 32). In
              your example, (33 \% 32) == 1.
              public class p20 {
71.
                   public static void main(String[] args)
                        int x = 07;
                        int y = 08;
                        System.out.println("" + x + y);
                   }
              }
              error
Answer:
              Any number beginning with zero is treated as an octal
Explanation:
              number (which is 0-7).
```