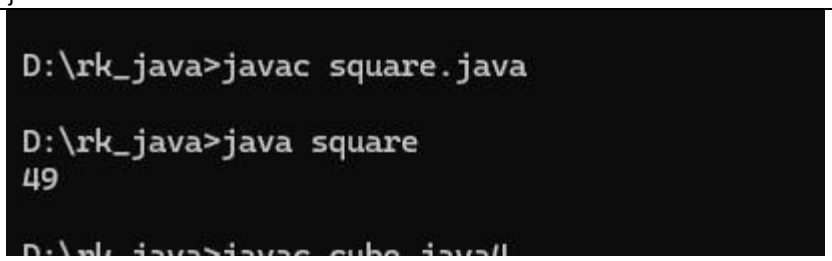
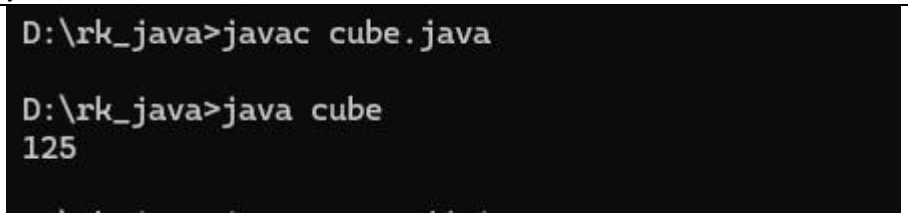
2_AKBARI_NIRALI
MCA_JAVA

Question 1	Implement using class and object print square

Input	import java.io.*;
	class square
	{
	void display()
	{
	int a=7;
	System.out.println(a*a);
	}
	public static void main(String s[])
	{
	square s1 = new square();
	s1.display();
	}
	}

output	
Question 2	Implement using class and object print cube

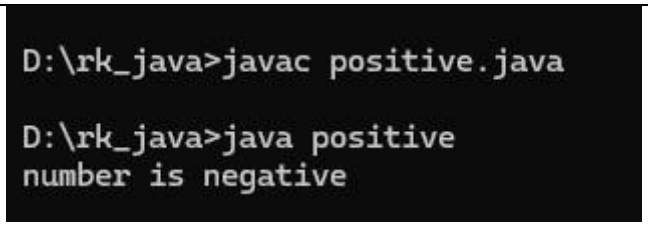
Input	import java.io.*;
	class cube
	{
	void show()
	{
	int a=5;
	System.out.println(a*a*a);
	}
	public static void main(String s[])
	{
	cube c1 = new cube();
	c1.show();
	}
	}

Output	
Question 3	Print Even odd number

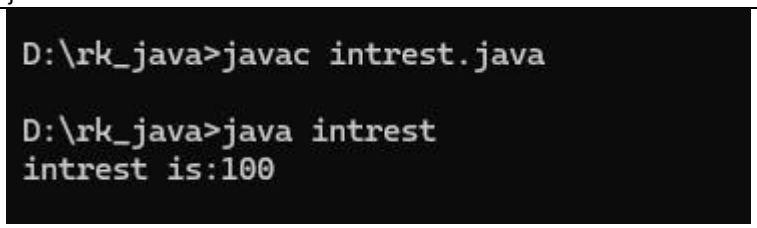
Input	import java.io.*;
	class evenodd
	{
	void disp()
	{
	int a=5;
	if(a%2==0)
	{
	System.out.println("number is even");
	}
	else
	{
	System.out.println("number is odd");
	}
	
	}
	public static void main(String s[])
	{
	evenodd d1 = new evenodd();
	d1.disp();
	}
	}

Question 4	Print positive Negative Number

Input	import java.io.*;
	class positive
	{
	void show()
	{
	int a=-1;
	if(a>0)
	{
	System.out.println("number is positive");
	}
	else if(a<0)
	{
	System.out.println("number is negative");
	}
	else
	{
	System.out.println("number is zero");
	}
	}
	public static void main(String s[])
	{
	positive p1 = new positive();
	p1.show();
	}
	}

Output	
Question 5	Print Interest

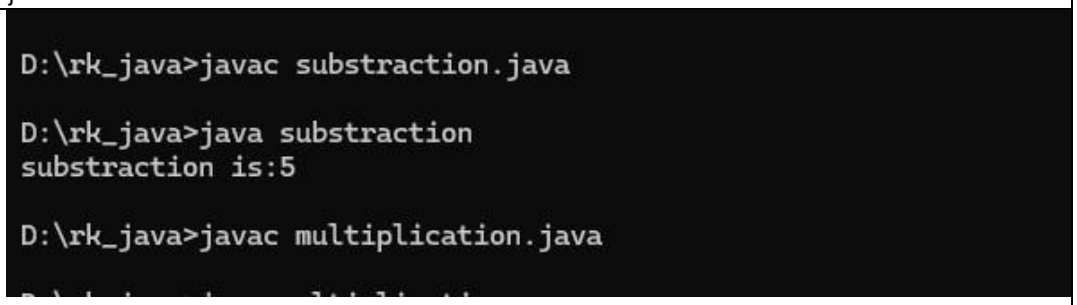
Input	import java.io.*;
	class intrest
	{
	void disp()
	{
	int p=20,r=10,n=50,a;
	a=p*r*n/100;
	System.out.println("intrest is:" +a);
	}
	public static void main(String s[])
	{
	intrest i1 = new intrest();
	i1.disp();
	}
	}

Output	
Question 6	Addition

Input	import java.io.*;
	class addition
	{
	void add()
	{
	int a=5,b=7,c;
	c = a+b;
	System.out.println("addition is:" +c);
	}
	public static void main(String s[])
	{
	addition a1 = new addition();
	a1.add();
	}
	}

Output	
Question 7	Substraction

Input	import java.io.*;
	class substraction
	{
	void sub()
	{
	int a=10,b=5,c;
	c=a-b;
	System.out.println("substraction is:" +c);
	}
	public static void main(String s[])
	{
	substraction s1 = new substraction();
	s1.sub();
	}
	}

Output	
Question 8	Multiplication

Input	import java.io.*;
	class multiplication
	{
	void mul()
	{
	int a=2,b=7,c;
	c=a*b;
	System.out.println("multiplication is:" +c);
	}
	public static void main(String s[])
	{
	multiplication m1 = new multiplication();
	m1.mul();
	}
	}

Output	
Question 9	Division

Input	import java.io.*;
	class division
	{
	void div()
	{
	int a=70,b=10,c;
	c=a/b;
	System.out.println("division is:" +c);
	}
	public static void main(String s[])
	{
	division d1 = new division();
	d1.div();
	}
	}

Output	
Question 10	Print Minimum Maximum Value

Input	import java.io.*;
	class max
	{
	void min()
	{
	int a=2,b=5,c=9;
	if(a>b && a>c)
	{
	System.out.println("a is max");
	}
	else if(b>a && b>c)
	{
	System.out.println("b is max");
	}
	else
	{
	System.out.println("c is max");
	}
	}
	public static void main(String s[])
	{
	max m1 = new max();

```
                m1.min();
        }
}
```

Output

```
D:\rk_java>javac max.java

D:\rk_java>java max
c is max

D:\rk_java>javac inches.java
```

Question 11 — Inches to centimetre

Input

```
import java.io.*;
class inches
{
        void disp()
        {
                int a=5,b;
                b = a*100;
                System.out.println("centimeter is:" +b);
        }
        public static void main(String s[])
        {
                inches i1 = new inches();
                i1.disp();
        }
}
```

Output

```
D:\rk_java>javac inches.java

D:\rk_java>java inches
centimeter is:500

D:\rk_java>javac dersion.java
dersion.java:4: error: '{' expected
        class show()
```

Question 12 — Derisions to Pieces

Input

```
import java.io.*;
class dersion
{
        void show()
        {
                int a=60,b;
                b=a/12;
                System.out.println("pieces is:" +b);
        }
        public static void main(String s[])
        {
                dersion d1 = new dersion();
                d1.show();
        }
}
```

Output

```
D:\rk_java>javac dersion.java

D:\rk_java>java dersion
pieces is:5

D:\rk_java>javac loop.java
loop.java:6: error: illegal start of type
```

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Question 13	Print even Number Using Loop

Input	import java.io.*;
	class loop
	{
	void display()
	{
	int i;
	for(i=2;i<=20;i++)
	{
	if(i%2==0)
	{
	System.out.println(i);
	}
	}
	}
	public static void main(String s[])
	{
	loop l1 = new loop();
	l1.display();
	}
	}

Output	

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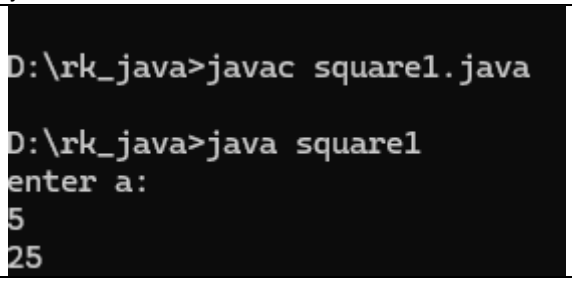
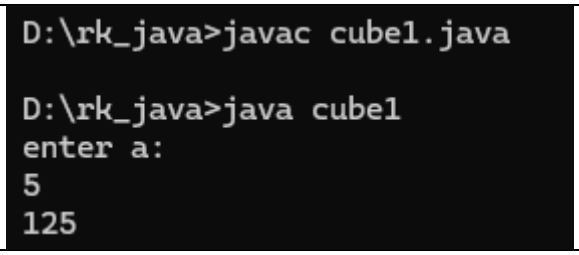
Question 1	Print Square

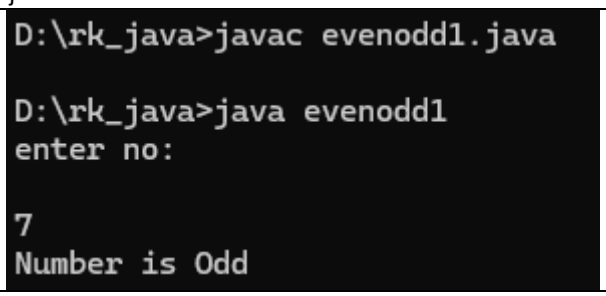
Input	import java.io.*;
	import java.util.*;
	class square1
	{
	void show()
	{
	int a;
	Scanner sc = new Scanner(System.in);
	System.out.println("enter a:");
	a=sc.nextInt();
	System.out.println(a*a);
	}
	public static void main(String s[])
	{
	square1 s1= new square1();
	s1.show();
	}
	}

Output	
Question 2	Print Cube

Input	import java.io.*;
	import java.util.*;
	class cube1
	{
	void disp()
	{
	int a;
	Scanner sc = new Scanner(System.in);
	System.out.println("enter a:");
	a = sc.nextInt();
	System.out.println(a*a*a);
	}
	public static void main(String s[])
	{
	cube1 c1 = new cube1();
	c1.disp();
	}
	}

Output	
Question 3	Print Even Odd

Input	import java.io.*;
	import java.util.*;
	class evenodd1
	{
	void disp()
	{
	int a;
	Scanner sc = new Scanner(System.in);
	System.out.println("enter no:");
	a = sc.nextInt();
	if(a%2==0)
	{
	System.out.println("Number is Even");
	}
	else
	{
	System.out.println("Number is Odd");
	}
	}
	public static void main(String s[])
	{
	evenodd1 e1 = new evenodd1();
	e1.disp();
	}
	}

Output	
Question 4	Print Positive Negative Number

Input	import java.io.*;
	import java.util.*;
	class positive1
	{
	void disp()
	{
	int no;
	Scanner sc = new Scanner(System.in);
	System.out.println("enter no:");
	no = sc.nextInt();

```
                if(no>0)
                {
                        System.out.println("Number is Positive");
                }
                else if(no<0)
                {
                        System.out.println("Number is Negative");
                }
                else
                {
                        System.out.println("Number is Zero");
                }
        }
        public static void main(String s[])
        {
                positive1 p1 = new positive1();
                p1.disp();
        }
}
```

Output

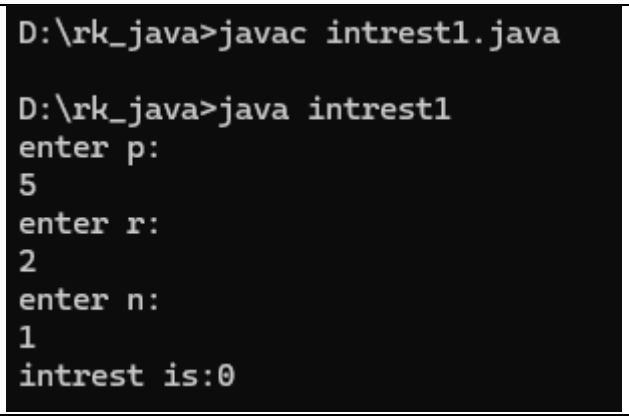
```
D:\rk_java>javac positive1.java

D:\rk_java>java positive1
enter no:
0
Number is Zero
```

Question 5

Print Interest

Input

```
import java.io.*;
import java.util.*;
class intrest1
{
        void show()
        {
                int p,r,n,a;
                Scanner sc = new Scanner(System.in);
                System.out.println("enter p:");
                p = sc.nextInt();
                System.out.println("enter r:");
                r = sc.nextInt();
                System.out.println("enter n:");
                n = sc.nextInt();
                a = p*r*n/100;
                System.out.println("intrest is:" +a);
        }
        public static void main(String s[])
        {
                intrest1 i1 = new intrest1();
                i1.show();
        }
}
```

Output	
Question 6	Addition, Subtraction, Multiplication, Division

Input	import java.io.*;
	import java.util.*;
	class add
	{
	void disp()
	{
	int a,b,c,d,e,f;
	Scanner sc = new Scanner(System.in);
	System.out.println("enter a:");
	a = sc.nextInt();
	System.out.println("enter b:");
	b = sc.nextInt();
	c = a+b;
	System.out.println("Addition is:" +a);
	d = a-b;
	System.out.println("Substraction is:" +d);
	e = a*b;
	System.out.println("multiplication is:" +e);
	f = a/b;
	System.out.println("division is:" +f);
	}
	public static void main(String s[])
	{
	add a1 = new add();
	a1.disp();
	}
	}

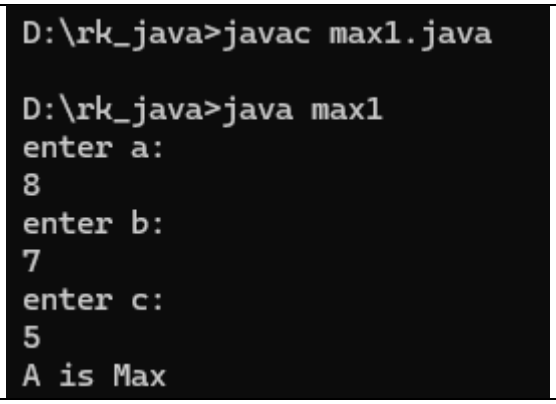
Output

```
D:\rk_java>javac add.java

D:\rk_java>java add
enter a:
70
enter b:
7
Addition is:70
Substraction is:63
multiplication is:490
division is:10
```

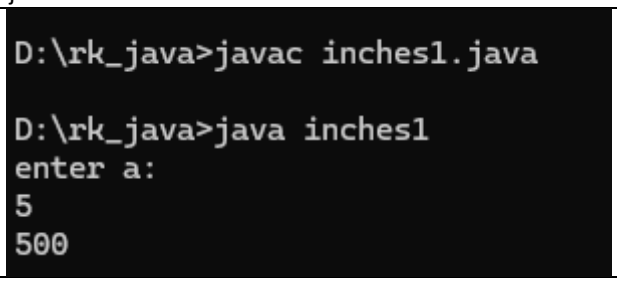
Question 7 | Print max and min value

Input

```
import java.io.*;
import java.util.*;
class max1
{
	void disp()
	{
		int a,b,c;
		Scanner sc = new Scanner(System.in);
		System.out.println("enter a:");
		a = sc.nextInt();
		System.out.println("enter b:");
		b =sc.nextInt();
		System.out.println("enter c:");
		c =sc.nextInt();
		if(a>b && a>c)
		{
			System.out.println("A is Max");
		}
		else if(b>a && b>c)
		{
			System.out.println("B is Max");
		}
		else
		{
			System.out.println("C is Max");
		}
	}
	public static void main(String s[])
	{
		max1 m1 = new max1();
		m1.disp();
	}
}
```

Output	
Question 8	Inches to Centimetre

Input	import java.io.*;
	import java.util.*;
	class inches1
	{
	void show()
	{
	int a,b;
	Scanner sc = new Scanner(System.in);
	System.out.println("enter a:");
	a = sc.nextInt();
	b = a*100;
	System.out.println(b);
	}
	public static void main(String s[])
	{
	inches1 i1 = new inches1();
	i1.show();
	}
	}

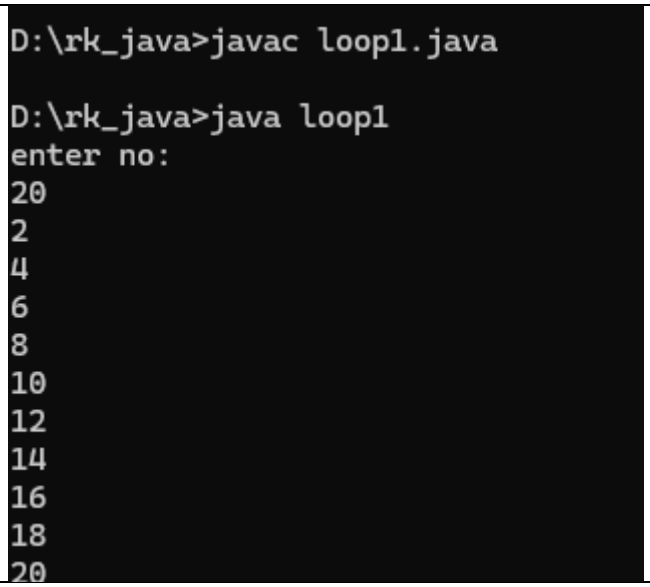
Output	
Question 9	Derision to pieces

Input	import java.io.*;
	import java.util.*;
	class diresion
	{
	void disp()
	{
	int a,b;
	Scanner sc = new Scanner(System.in);
	System.out.println("Enter a:");
	a = sc.nextInt();
	b = a*12;
	System.out.println(b);

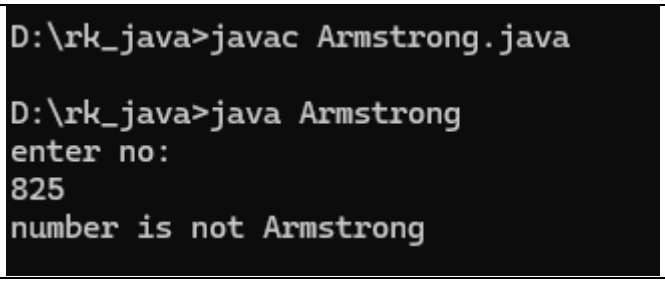
	}
	public static void main(String s[])
	{
	diresion d1 = new diresion();
	d1.disp();
	}
	}

Output	D:\rk_java>javac diresion.java D:\rk_java>java diresion Enter a: 2 24
Question 10	Print even number using loop

Input	import java.io.*;
	import java.util.*;
	class loop1
	{
	void show()
	{
	int i,no;
	Scanner sc = new Scanner(System.in);
	System.out.println("enter no:");
	no = sc.nextInt();
	for(i=2; i<=no; i++)
	{
	if(i%2==0)
	{
	System.out.println(i);
	}
	}
	}
	public static void main(String s[])
	{
	loop1 l1 = new loop1();
	l1.show();
	}
	}

Output	
Question 11	Print Armstrong number

Input	import java.util.*;
	class Armstrong
	{
	static void disp()
	{
	int no,r,temp,sum;
	Scanner sc=new Scanner(System.in);
	System.out.println("enter no:");
	no=sc.nextInt();
	r=0;
	temp=no;
	sum=0;
	while(temp>0)
	{
	r=temp%10;
	temp=temp/10;
	sum=sum+r*r*r;
	}
	if(sum==0)
	{
	System.out.println("number is Armstrong");
	}
	else
	{
	System.out.println("number is not Armstrong");
	}
	}
	public static void main(String s[])
	{
	disp();
	}
	}

Output	 D:\rk_java>javac Armstrong.java D:\rk_java>java Armstrong enter no: 825 number is not Armstrong	

2_AKBARI_NIRALI
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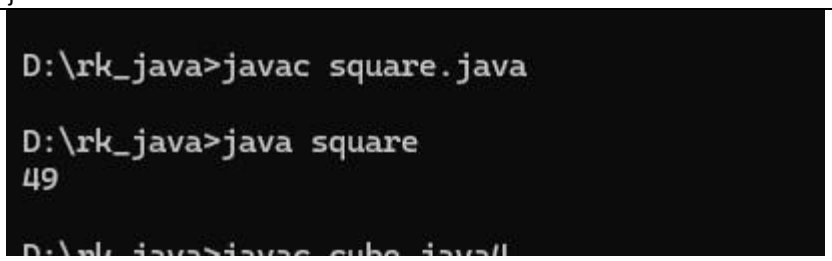
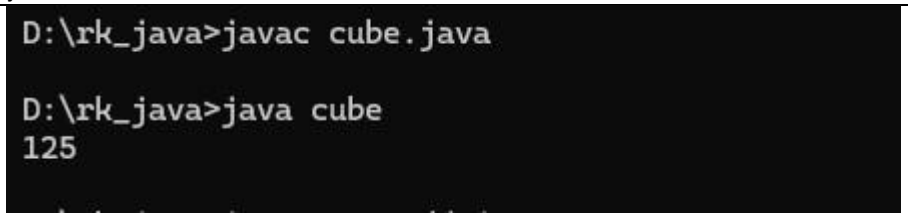
Question 1	Implement using class and object print square

Input	import java.io.*;
	class square
	{
	void display()
	{
	int a=7;
	System.out.println(a*a);
	}
	public static void main(String s[])
	{
	square s1 = new square();
	s1.display();
	}
	}

output	
Question 2	Implement using class and object print cube

Input	import java.io.*;
	class cube
	{
	void show()
	{
	int a=5;
	System.out.println(a*a*a);
	}
	public static void main(String s[])
	{
	cube c1 = new cube();
	c1.show();
	}
	}

Output	
Question 3	Print Even odd number

Input	import java.io.*;
	class evenodd
	{
	void disp()
	{
	int a=5;
	if(a%2==0)
	{
	System.out.println("number is even");
	}
	else
	{
	System.out.println("number is odd");
	}
	
	}
	public static void main(String s[])
	{
	evenodd d1 = new evenodd();
	d1.disp();
	}
	}

Question 4	Print positive Negative Number

Input	import java.io.*;
	class positive
	{
	void show()
	{
	int a=-1;
	if(a>0)
	{
	System.out.println("number is positive");
	}
	else if(a<0)
	{
	System.out.println("number is negative");
	}
	else
	{
	System.out.println("number is zero");
	}
	}
	public static void main(String s[])
	{
	positive p1 = new positive();
	p1.show();
	}
	}

Output

```
D:\rk_java>javac positive.java

D:\rk_java>java positive
number is negative
```

Question 5

Print Interest

Input

```
import java.io.*;
class intrest
{
	void disp()
	{
		int p=20,r=10,n=50,a;
		a=p*r*n/100;
		System.out.println("intrest is:" +a);
	}
	public static void main(String s[])
	{
		intrest i1 = new intrest();
		i1.disp();
	}
}
```

Output

```
D:\rk_java>javac intrest.java

D:\rk_java>java intrest
intrest is:100
```

Question 6

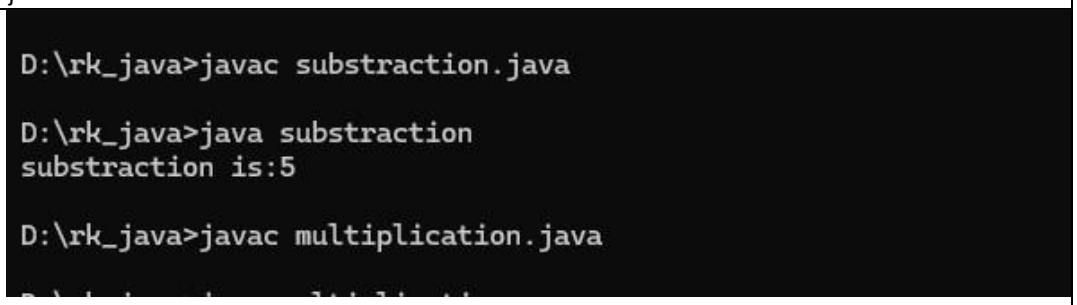
Addition

Input

```
import java.io.*;
class addition
{
	void add()
	{
		int a=5,b=7,c;
		c = a+b;
		System.out.println("addition is:" +c);
	}
	public static void main(String s[])
	{
		addition a1 = new addition();
		a1.add();
	}
}
```

Output	
Question 7	Substraction

Input	import java.io.*;
	class substraction
	{
	void sub()
	{
	int a=10,b=5,c;
	c=a-b;
	System.out.println("substraction is:" +c);
	}
	public static void main(String s[])
	{
	substraction s1 = new substraction();
	s1.sub();
	}
	}

Output	
Question 8	Multiplication

Input	import java.io.*;
	class multiplication
	{
	void mul()
	{
	int a=2,b=7,c;
	c=a*b;
	System.out.println("multiplication is:" +c);
	}
	public static void main(String s[])
	{
	multiplication m1 = new multiplication();
	m1.mul();
	}
	}

Output	
Question 9	Division

Input	import java.io.*;
	class division
	{
	void div()
	{
	int a=70,b=10,c;
	c=a/b;
	System.out.println("division is:" +c);
	}
	public static void main(String s[])
	{
	division d1 = new division();
	d1.div();
	}
	}

Output	
Question 10	Print Minimum Maximum Value

Input	import java.io.*;
	class max
	{
	void min()
	{
	int a=2,b=5,c=9;
	if(a>b && a>c)
	{
	System.out.println("a is max");
	}
	else if(b>a && b>c)
	{
	System.out.println("b is max");
	}
	else
	{
	System.out.println("c is max");
	}
	}
	public static void main(String s[])
	{
	max m1 = new max();

	m1.min();
	}
	}

Output	
Question 11	Inches to centimetre

Input	import java.io.*;
	class inches
	{
	void disp()
	{
	int a=5,b;
	b = a*100;
	System.out.println("centimeter is:" +b);
	}
	public static void main(String s[])
	{
	inches i1 = new inches();
	i1.disp();
	}
	}

Output	
Question 12	Derisions to Pieces

Input	import java.io.*;
	class dersion
	{
	void show()
	{
	int a=60,b;
	b=a/12;
	System.out.println("pieces is:" +b);
	}
	public static void main(String s[])
	{
	dersion d1 = new dersion();
	d1.show();
	}
	}

Output	

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Question 13	Print even Number Using Loop

Input	import java.io.*;
	class loop
	{
	void display()
	{
	int i;
	for(i=2;i<=20;i++)
	{
	if(i%2==0)
	{
	System.out.println(i);
	}
	}
	}
	public static void main(String s[])
	{
	loop l1 = new loop();
	l1.display();
	}
	}

Output	

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Question 1	class A
	{
	final public int GetResult(int a, int b) { return 0; }
	}
	class B extends A
	{
	public int GetResult(int a, int b) {return 1; }
	}
	public class Test
	{
	public static void main(String args[])
	{
	B b = new B();
	System.out.println("x = " + b.GetResult(0, 1));
	}
	}

Output	Ⓐ x = 0 Ⓑ x = 1 Ⓒ Compilation fails. Ⓓ An exception is thrown at runtime. **Answer:** Option Ⓒ

Question 2	public class Test
	{
	public static void main(String args[])
	{
	class Foo
	{
	public int i = 3;
	}
	Object o = (Object)new Foo();
	Foo foo = (Foo)o;
	System.out.println("i = " + foo.i);
	}
	}

Output	Ⓐ i = 3 ✅ Ⓑ Compilation fails. Ⓒ i = 5 Ⓓ A `ClassCastException` will occur. **Answer:** Option Ⓐ

Question 3	public class A
	{
	void A() /* Line 3 */
	{
	System.out.println("Class A");
	}
	public static void main(String[] args)
	{
	new A();
	}
	}

Output	Ⓐ Class A Ⓑ Compilation fails. Ⓒ An exception is thrown at line 3. Ⓓ The code executes with no output. ✅ **Answer:** Option Ⓓ

Question 4	class Super
	{
	public int i = 0;
	
	public Super(String text) /* Line 4 */
	{
	i = 1;
	}
	}
	
	class Sub extends Super
	{
	public Sub(String text)
	{
	i = 2;
	}

	public static void main(String args[])
	{
	Sub sub = new Sub("Hello");
	System.out.println(sub.i);
	}
	}

Output	Ⓐ 0 Ⓑ 1 Ⓒ 2 Ⓓ Compilation fails. ✓ Answer: Option Ⓓ

Question 5	public class Test
	{
	public int aMethod()
	{
	static int i = 0;
	i++;
	return i;
	}
	public static void main(String args[])
	{
	Test test = new Test();
	test.aMethod();
	int j = test.aMethod();
	System.out.println(j);
	}
	}

Output	Ⓐ 0 Ⓑ 1 Ⓒ 2 Ⓓ Compilation fails. ✓ Answer: Option Ⓓ Explanation:

Question 6	interface Count
	{
	short counter = 0;
	void countUp();
	}
	public class TestCount implements Count
	{
	public static void main(String [] args)
	{
	TestCount t = new TestCount();
	t.countUp();
	}
	public void countUp()
	{
	for (int x = 6; x>counter; x--, ++counter) /* Line 14 */
	{
	System.out.print(" " + counter);
	}
	}
	}

Output	Ⓐ 0 1 2 Ⓑ 1 2 3 Ⓒ 0 1 2 3 Ⓓ 1 2 3 4 Ⓔ Compilation fails **Answer:** Option Ⓔ

Question 7	class Base
	{
	Base()
	{
	System.out.print("Base");
	}
	}
	public class Alpha extends Base
	{
	public static void main(String[] args)
	{
	new Alpha(); /* Line 12 */
	new Base(); /* Line 13 */
	}
	}

Output	Ⓐ Base Ⓑ BaseBase ✓ Ⓒ Compilation fails Ⓓ The code runs with no output **Answer:** Option Ⓑ

Question 8	import java.util.*;
	public class NewTreeSet2 extends NewTreeSet
	{
	public static void main(String [] args)
	{
	NewTreeSet2 t = new NewTreeSet2();
	t.count();
	}
	}
	protected class NewTreeSet
	{
	void count()
	{
	for (int x = 0; x < 7; x++,x++)
	{
	System.out.print(" " + x);
	}
	}
	}

Output	Ⓐ 0 2 4 Ⓑ 0 2 4 6 Ⓒ Compilation fails at line 2 Ⓓ Compilation fails at line 10 ✓ **Answer:** Option Ⓓ

Question 9	public class ArrayTest
	{
	public static void main(String[ ] args)
	{
	float f1[ ], f2[ ];
	f1 = new float[10];
	f2 = f1;
	System.out.println("f2[0] = " + f2[0]);

	} }
Output	Ⓐ It prints f2[0] = 0.0 ✓ Ⓑ It prints f2[0] = NaN Ⓒ An error at `f2 = f1;` causes compile to fail. Ⓓ It prints the garbage value. **Answer:** Option Ⓐ

Question 10	class Super
	{
	public Integer getLength()
	{
	return new Integer(4);
	}
	}
	
	public class Sub extends Super
	{
	public Long getLength()
	{
	return new Long(5);
	}
	
	public static void main(String[] args)
	{
	Super sooper = new Super();
	Sub sub = new Sub();
	System.out.println(
	sooper.getLength().toString() + "," + sub.getLength().toString());
	}
	}

Output	Ⓐ 4, 4 Ⓑ 4, 5 Ⓒ 5, 4 Ⓓ Compilation fails. ✓ **Answer:** Option Ⓓ

Question 11	class PassA
	{
	public static void main(String [] args)
	{
	PassA p = new PassA();
	p.start();
	}
	
	void start()
	{
	long [] a1 = {3,4,5};
	long [] a2 = fix(a1);
	System.out.print(a1[0] + a1[1] + a1[2] + " ");
	System.out.println(a2[0] + a2[1] + a2[2]);
	}
	
	long [] fix(long [] a3)
	{
	a3[1] = 7;
	return a3;
	}
	}

Output	Ⓐ 12 15 Ⓑ 15 15 Ⓒ 3 4 5 3 7 5 Ⓓ 3 7 5 3 7 5 **Answer:** Option Ⓑ

Question 12	class Test
	{
	public static void main(String [] args)
	{
	Test p = new Test();
	p.start();
	}
	
	void start()
	{
	boolean b1 = false;
	boolean b2 = fix(b1);
	System.out.println(b1 + " " + b2);
	}
	
	boolean fix(boolean b1)

	{
	b1 = true;
	return b1;
	}
	}

Output	Ⓐ true true Ⓑ false true ✓ Ⓒ true false Ⓓ false false **Answer:** Option Ⓑ

Question 13	class PassS
	{
	public static void main(String [] args)
	{
	PassS p = new PassS();
	p.start();
	}
	
	void start()
	{
	String s1 = "slip";
	String s2 = fix(s1);
	System.out.println(s1 + " " + s2);
	}
	
	String fix(String s1)
	{
	s1 = s1 + "stream";
	System.out.print(s1 + " ");
	return "stream";
	}
	}

Output	Ⓐ slip stream Ⓑ slipstream stream Ⓒ stream slip stream Ⓓ slipstream slip stream ✓ **Answer:** Option Ⓓ

Question 14	class BitShift
	{
	public static void main(String [] args)
	{
	int x = 0x80000000;
	System.out.print(x + " and ");
	x = x >>> 31;
	System.out.println(x);
	}
	}

Output	Ⓐ -2147483648 and 1 ✓ Ⓑ 0x80000000 and 0x00000001 Ⓒ -2147483648 and -1 Ⓓ 1 and -2147483648 **Answer:** Option Ⓐ

Question 15	class Equals
	{
	public static void main(String [] args)
	{
	int x = 100;
	double y = 100.1;
	boolean b = (x = y); /* Line 7 */
	System.out.println(b);
	}
	}

Output	Ⓐ true Ⓑ false Ⓒ Compilation fails ✓ Ⓓ An exception is thrown at runtime **Answer:** Option Ⓒ

Question 16	class Test
	{
	public static void main(String [] args)
	{
	int x=20;
	String sup = (x < 15) ? "small" : (x < 22)? "tiny" : "huge";

	System.out.println(sup); } }
Output	Ⓐ small Ⓑ tiny ✅ Ⓒ huge Ⓓ Compilation fails **Answer:** Option Ⓑ

Question 17	class Test
	{
	public static void main(String [] args)
	{
	int x= 0;
	int y= 0;
	for (int z = 0; z < 5; z++)
	{
	if ((++x > 2) && (++y > 2))
	{
	x++;
	}
	}
	System.out.println(x + " " + y);
	}
	}

Output	Ⓐ 5 2 Ⓑ 5 3 Ⓒ 6 3 ✅ Ⓓ 6 4 **Answer:** Option Ⓒ

Question 18	class Test
	{
	public static void main(String [] args)
	{
	int x= 0;
	int y= 0;
	for (int z = 0; z < 5; z++)

	{
	if ((++x > 2) || (++y > 2))
	{
	x++;
	}
	}
	System.out.println(x + " " + y);
	}
	}

Output	Ⓐ 5 3 Ⓑ 8 2 ✓ Ⓒ 8 3 Ⓓ 8 5 Answer: Option Ⓑ

Question 19	class Bitwise
	{
	public static void main(String [] args)
	{
	int x = 11 & 9;
	int y = x ^ 3;
	System.out.println(y | 12);
	}
	}

Output	Ⓐ 0 Ⓑ 7 Ⓒ 8 Ⓓ 14 ✓ Answer: Option Ⓓ

Question 20	class SSBool
	{
	public static void main(String [] args)
	{
	boolean b1 = true;
	boolean b2 = false;
	boolean b3 = true;

	if (b1 & b2 | b2 & b3 | b2) /* Line 8 */
	System.out.print("ok ");
	if (b1 & b2 | b2 & b3 | b2 | b1) /*Line 10*/
	System.out.println("dokey");
	}
	}

Output	Ⓐ ok Ⓑ dokey ✅ Ⓒ ok dokey Ⓓ No output is produced Ⓔ Compilation error **Answer:** Option Ⓑ

Question 21	class SC2
	{
	public static void main(String [] args)
	{
	SC2 s = new SC2();
	s.start();
	}
	
	void start()
	{
	int a = 3;
	int b = 4;
	System.out.print(" " + 7 + 2 + " ");
	System.out.print(a + b);
	System.out.print(" " + a + b + " ");
	System.out.print(foo() + a + b + " ");
	System.out.println(a + b + foo());
	}
	
	String foo()
	{
	return "foo";
	}
	}

Output	Ⓐ 9 7 7 foo 7 7foo Ⓑ 72 34 34 foo34 34foo Ⓒ 9 7 7 foo34 34foo Ⓓ 72 7 34 foo34 7foo ✓ **Answer:** Option Ⓓ

Question 22	class Test
	{
	static int s;
	public static void main(String [] args)
	{
	Test p = new Test();
	p.start();
	System.out.println(s);
	}
	
	void start()
	{
	int x = 7;
	twice(x);
	System.out.print(x + " ");
	}
	
	void twice(int x)
	{
	x = x*2;
	s = x;
	}
	}

Output	Ⓐ 7 7 Ⓑ 7 14 ✓ Ⓒ 14 0 Ⓓ 14 14 **Answer:** Option Ⓑ
Question 23	class Two { byte x;

	}
	
	class PassO
	{
	public static void main(String [] args)
	{
	PassO p = new PassO();
	p.start();
	}
	
	void start()
	{
	Two t = new Two();
	System.out.print(t.x + " ");
	Two t2 = fix(t);
	System.out.println(t.x + " " + t2.x);
	}
	
	Two fix(Two tt)
	{
	tt.x = 42;
	return tt;
	}
	}

Output	Ⓐ null null 42 Ⓑ 0 0 42 Ⓒ 0 42 42 ✓ Ⓓ 0 0 0 **Answer:** Option Ⓒ

Question 24	class BoolArray
	{
	boolean [] b = new boolean[3];
	int count = 0;
	
	void set(boolean [] x, int i)
	{
	x[i] = true;
	++count;
	}
	
	public static void main(String [] args)
	{
	BoolArray ba = new BoolArray();

	ba.set(ba.b, 0);
	ba.set(ba.b, 2);
	ba.test();
	}
	
	void test()
	{
	if (b[0] && b[1] | b[2])
	count++;
	if (b[1] && b[(++count - 2)])
	count += 7;
	System.out.println("count = " + count);
	}
	}

Output	Ⓐ count = 0 Ⓑ count = 2 Ⓒ count = 3 ✅ Ⓓ count = 4 **Answer:** Option Ⓒ

Question 25	public class Test
	{
	public static void leftshift(int i, int j)
	{
	i <<= j;
	}
	public static void main(String args[])
	{
	int i = 4, j = 2;
	leftshift(i, j);
	System.out.println(i);
	}
	}

Output	Ⓐ 2 Ⓑ 4 ✓ Ⓒ 8 Ⓓ 16 **Answer:** Option Ⓑ

Question 26	import java.awt.*;
	class Ticker extends Component
	{
	public static void main (String [] args)
	{
	Ticker t = new Ticker();
	/* Missing Statements ? */
	}
	}

Output	Ⓐ 1 and 4 Ⓑ 2 and 3 Ⓒ 1 and 3 Ⓓ 2 and 4 ✓ **Answer:** Option Ⓓ

Question 27	import java.awt.Button;
	class CompareReference
	{
	public static void main(String [] args)
	{
	float f = 42.0f;
	float [] f1 = new float[2];
	float [] f2 = new float[2];
	float [] f3 = f1;
	long x = 42;
	f1[0] = 42.0f;
	}
	}

Output	Ⓐ 1, 2 and 3 Ⓑ 2, 4 and 5 ✓ Ⓒ 3, 4 and 5 Ⓓ 1, 4 and 5 **Answer:** Option Ⓑ

Question 28	public class Test
	{
	public static void main (String[] args)
	{
	String foo = args[1];
	String bar = args[2];
	String baz = args[3];
	System.out.println("baz = " + baz); /* Line 8 */
	}
	}

Output	Ⓐ baz = Ⓑ baz = null Ⓒ baz = blue Ⓓ Runtime Exception ✓ **Answer:** Option Ⓓ

Question 29	public class Test
	{
	public static void main (String args[])
	{
	String str = NULL;
	System.out.println(str);
	}
	}

Output	Ⓐ NULL Ⓑ Compile Error ✓ Ⓒ Code runs but no output Ⓓ Runtime Exception **Answer:** Option Ⓑ

Question 30	package foo;
	import java.util.Vector; /* Line 2 */
	private class MyVector extends Vector
	{
	int i = 1; /* Line 5 */
	public MyVector()
	{
	i = 2;
	}
	}
	public class MyNewVector extends MyVector
	{
	public MyNewVector ()
	{
	i = 4; /* Line 15 */
	}
	public static void main (String args [])
	{
	MyVector v = new MyNewVector(); /* Line 19 */
	}
	}

Output	Ⓐ Compilation will succeed. Ⓑ Compilation will fail at line 3. ✓ Ⓒ Compilation will fail at line 5. Ⓓ Compilation will fail at line 15. **Answer:** Option Ⓑ
Question 31	public class Test { private static int[] x; public static void main(String[] args) { System.out.println(x[0]);

	} }
Output	Ⓐ 0 Ⓑ null Ⓒ Compile Error Ⓓ NullPointerException at runtime ✓ **Answer:** Option Ⓓ

Question 32	import java.util.*;
	class I
	{
	public static void main (String[] args)
	{
	Object i = new ArrayList().iterator();
	System.out.print((i instanceof List)+",");
	System.out.print((i instanceof Iterator)+",");
	System.out.print(i instanceof ListIterator);
	}
	}

Output	Ⓐ Prints: false, false, false Ⓑ Prints: false, false, true Ⓒ Prints: false, true, false ✓ Ⓓ Prints: false, true, true **Answer:** Option Ⓒ

Question 33	public class Test
	{
	private static float[] f = new float[2];
	public static void main (String[] args)
	{
	System.out.println("f[0] = " + f[0]);
	}
	}

Output	Ⓐ f[0] = 0 Ⓑ f[0] = 0.0 ✓ Ⓒ Compile Error Ⓓ Runtime Exception **Answer:** Option Ⓑ

Question 34	import java.util.*;
	class H
	{
	public static void main (String[] args)
	{
	Object x = new Vector().elements();
	System.out.print((x instanceof Enumeration)+",");
	System.out.print((x instanceof Iterator)+",");
	System.out.print(x instanceof ListIterator);
	}
	}

Output	Ⓐ Prints: false,false,false Ⓑ Prints: false,false,true Ⓒ Prints: false,true,false Ⓓ Prints: true,false,false ✓ **Answer:** Option Ⓓ

Question 35	TreeSet map = new TreeSet();
	map.add("one");
	map.add("two");
	map.add("three");
	map.add("four");
	map.add("one");
	Iterator it = map.iterator();
	while (it.hasNext())
	{
	System.out.print(it.next() + " ");
	}

Output	Ⓐ one two three four Ⓑ four three two one Ⓒ four one three two ✓ Ⓓ one two three four one **Answer:** Option Ⓒ

Question 36	public static void main(String[] args)
	{
	Object obj = new Object()
	{
	public int hashCode()
	{
	return 42;
	}
	};
	System.out.println(obj.hashCode());
	}

Output	Ⓐ 42 ✓ Ⓑ Runtime Exception Ⓒ Compile Error at line 2 Ⓓ Compile Error at line 5 **Answer:** Option Ⓐ

Question 37	class Test1
	{
	public int value;
	public int hashCode() { return 42; }
	}
	class Test2
	{
	public int value;
	public int hashcode() { return (int)(value^5); }
	}

Output	Ⓐ `class Test1` will not compile. Ⓑ The `Test1 hashCode()` method is more efficient than the `Test2 hashCode()` met Ⓒ The `Test1 hashCode()` method is less efficient than the `Test2 hashCode()` meth Ⓓ `class Test2` will not compile. **Answer:** Option Ⓒ