

1.The average of first 10 even numbers is?

```
package Assignment_3_2;

import java.util.Scanner;

public class que_1 {

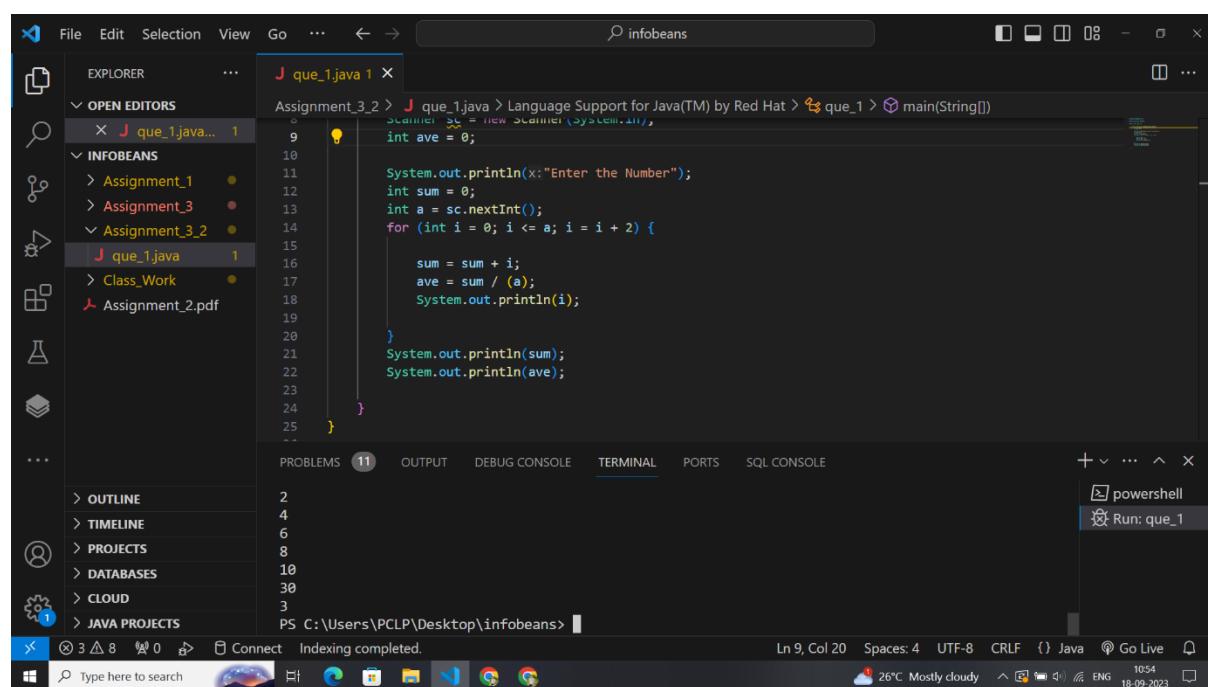
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int ave = 0;

        System.out.println("Enter the Number");
        int sum = 0;
        int a = sc.nextInt();
        for (int i = 0; i <= a; i = i + 2) {

            sum = sum + i;
            ave = sum / (a);
            System.out.println(i);

        }
        System.out.println(sum);
        System.out.println(ave);

    }
}
```



2.The average of 11 numbers is 10.9. If the average of first six is 10.5 and that of the last six is 11.4 the sixth number is?

```
package Assignment_3_2;

public class que_2 {

    public static void main(String[] args) {
        double ave_11_num = 10.9 * 11, ave_f6 = 10.5 * 6, ave_l6 = 11.4 * 6;

        System.out.println(ave_11_num);
        System.out.println(ave_f6);
        System.out.println(ave_l6);

        double sixth_nm = (ave_f6 + ave_l6) - ave_11_num;

        System.out.println("sixth number is: " + sixth_nm);

    }
}
```

The screenshot shows the Eclipse IDE interface with the following details:

- File Bar:** File, Edit, Selection, View, Go, ...
- Search Bar:** infobeans
- Toolbar:** Standard icons for file operations.
- Left Sidebar (EXPLORER):** Shows open editors (que_1.java 1, que_2.java 1), infobeans projects (Assignment_1, Assignment_3, Assignment_3_2), and files (que_1.java, que_2.java, Class_Work, Assignment_2.pdf).
- Central Area:** Editor showing the Java code for que_2.java.
- Bottom Status Bar:** Labeled "Indexing completed".
- Bottom Taskbar:** Shows the Windows taskbar with various pinned icons (File Explorer, Task View, Edge, File Manager, Taskbar Icons, Google Chrome, Microsoft Edge).
- Bottom Right Corner:** Shows system status (26°C Mostly cloudy, ENG, 11:01, 18-09-2023).

3.The average of first 10 natural numbers is?

```
package Assignment_3_2;

import java.util.Scanner;

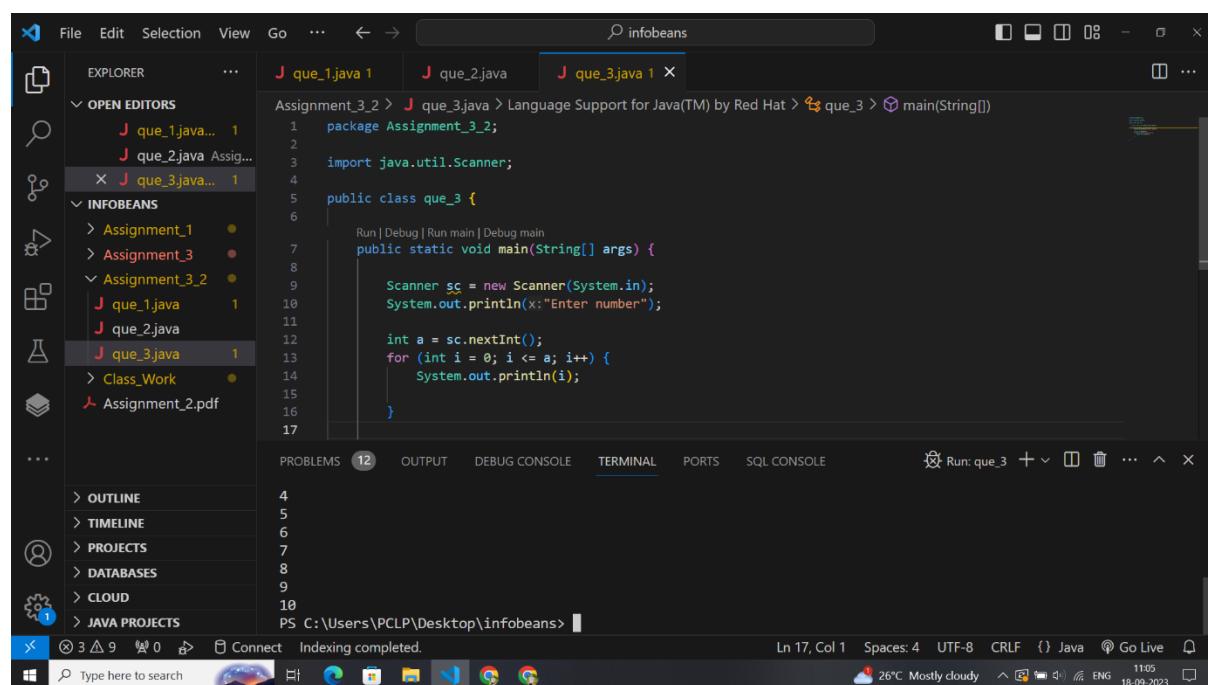
public class que_3 {

    public static void main(String[] args) {

        Scanner sc = new Scanner(System.in);
        System.out.println("Enter number");

        int a = sc.nextInt();
        for (int i = 0; i <= a; i++) {
            System.out.println(i);

        }
    }
}
```



The screenshot shows the Eclipse IDE interface with the following details:

- File Bar:** File, Edit, Selection, View, Go, ...
- Toolbar:** Standard icons for file operations.
- Search Bar:** / infobeans
- Left Sidebar (OPEN EDITORS):** que_1.java 1, que_2.java, que_3.java 1 (highlighted).
- Left Sidebar (INFOBEANS):** Assignment_1, Assignment_3, Assignment_3_2 (highlighted), Class_Work, Assignment_2.pdf.
- Central Editor:** que_3.java 1 (highlighted). The code is as follows:

```
Assignment_3_2 > J que_3.java > Language Support for Java(TM) by Red Hat > que_3 > main(String[])
1 package Assignment_3_2;
2
3 import java.util.Scanner;
4
5 public class que_3 {
6
7     public static void main(String[] args) {
8
9         Scanner sc = new Scanner(System.in);
10        System.out.println("Enter number");
11
12        int a = sc.nextInt();
13        for (int i = 0; i <= a; i++) {
14            System.out.println(i);
15
16        }
17    }
}
```

- Bottom Status Bar:** PROBLEMS 12, OUTPUT, DEBUG CONSOLE, TERMINAL, PORTS, SQL CONSOLE, Run: que_3, Ln 17, Col 1, Spaces: 4, UTF-8, CRLF, Java, Go Live, 26°C Mostly cloudy, ENG, 11:05, 18-09-2023.

```
package Assignment_3_2;

public class que_4 {

    public static void main(String[] args) {

        int a = 3, b = 4, sum = 420;
        int c = a + b;

        int ave = sum / c;
```

```

        int d = ave * 3;

        System.out.println(" Smaller number :" + d);

    }

}

```

The screenshot shows the Eclipse IDE interface with the following details:

- File Bar:** File, Edit, Selection, View, Go, ...
- Title Bar:** infobeans
- Toolbar:** Standard Eclipse toolbar icons.
- Left Sidebar (Explorer):**
 - OPEN EDITORS: que_1.java, que_2.java, que_3.java, que_4.java (selected).
 - INFOBEANS: Assignment_1, Assignment_3, Assignment_3_2 (selected), que_1.java, que_2.java, que_3.java, que_4.java, Class_Work.
 - Outline, Timeline, Projects, Databases, Cloud, Java Projects.
- Central Area:**
 - Editor tabs: que_1.java 1, que_2.java, que_3.java 1, que_4.java X.
 - Code for que_4.java (Assignment_3_2):

```

1 package Assignment_3_2;
2
3 public class que_4 {
4
5     public static void main(String[] args) {
6
7         int a = 3, b = 4, sum = 420;
8         int c = a + b;
9
10        int ave = sum / c;
11        int d = ave * 3;
12
13        System.out.println(d);
14    }
15
16 }
17

```
 - Terminal tab: Try the new cross-platform PowerShell <https://aka.ms/pscore6>
 - Output tab: PS C:\Users\PCLP\Desktop\infobeans> & 'C:\Program Files\Java\jdk-13.0.2\bin\java.exe' '-cp' 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd48ae5dbfa9e88bddd32d2b8\redhat_java\jdt_ws\infobeans_ade7c1e9\bin' 'Assignment_3_2.que_4'
180
PS C:\Users\PCLP\Desktop\infobeans>
- Bottom Status Bar:** Ln 16, Col 2, Spaces: 4, UTF-8, CRLF, Java, Go Live, 11:12, 26°C Mostly cloudy, ENG, 18-09-2023.

5.Sum of two numbers is 15. Two times of the first exceeds by 5 from the three

times of the other. Then the numbers will be?

```

package Assignment_3_2;

public class que_5 {

    public static void main(String[] args) {

        int x = 10, y = 5;
        int z = x + y;
        z = 15;
        // int a = (2 * x - 3*y) ;
        // int b = a-5;

        y = z - x;
        int a = 2 * x - 3 * (y);
        int b = a - 5;
        System.out.println(b);

    }
}

```

The screenshot shows the Eclipse IDE interface. The left sidebar has sections for EXPLORER, OPEN EDITORS, INFOBEANS, and JAVA PROJECTS. The OPEN EDITORS section shows five tabs: que_1.java 1, que_2.java, que_3.java 1, que_4.java, and que_5.java 2. The que_5.java 2 tab is selected, displaying the following Java code:

```
Assignment_3_2 > que_5.java > Language Support for Java(TM) by Red Hat > que_5 > main(String[])
4 Run | Debug | Run main | Debug main
5 public static void main(String[] args) {
6
7     int x = 10, y = 5;
8     int z = x+y;
9     z = 15;
10    // int a = (2 * x - 3*y) ;
11    // int b = a-5;
12
13    y = z - x;
14    int a = 2 * x - 3 * (y);
15    int b = a - 5;
16    System.out.println(b);■
17
18 }
19
20 }
```

The Problems view shows 14 errors. The terminal output shows the command to run the program and the resulting output:

```
PS C:\Users\PCLP\Desktop\infobeans> & 'C:\Program Files\Java\jdk-13.0.2\bin\java.exe' '-cp' 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd48ae5dbfa9e88bddd32d2b8\redhat.java\jdt_ws\infobeans_ade7c1e9\bin' 'Assignment_3_2 que_5'
PS C:\Users\PCLP\Desktop\infobeans> c:; cd 'c:/Users/PCLP/Desktop/infobeans'; & 'C:\Program Files\Java\jdk-13.0.2\bin\java.exe' '-cp' 'C:/Users/PCLP/AppData/Roaming/Code/User/workspaceStorage/9bd1afcd48ae5dbfa9e88bddd32d2b8/redhat.java/jdt_ws/infobeans_ade7c1e9/bin' 'Assignment_3_2 que_5'
0
PS C:\Users\PCLP\Desktop\infobeans>
```

6.The length of the bridge, which a train 130 metres long and travelling at 45

km/hr can cross in 30 seconds, is:

```
package Assignment_3_2;

public class que_6 {

    public static void main(String[] args) {

        double lengthOfTrain = 130;
        double time = 30;
        double speedOfTrain = 12.5;

        // speed =distance/time   d =(s*t)- total length of train
        // 45km/hr = 45*1000/3600 to change m/s = 12.5
        double length_bridge = (speedOfTrain * time) - lengthOfTrain;

        System.out.println(length_bridge);

    }
}
```

The screenshot shows the Microsoft Visual Studio Code interface. The left sidebar has sections for EXPLORER, OPEN EDITORS, and INFOBEANS. In the OPEN EDITORS section, 'que_6.java' is selected. The main editor window displays Java code for question 6. The code calculates the speed of a train given its length and the time it takes to pass a man running in the same direction. The terminal panel at the bottom shows the command line output of running the program.

```
Assignment_3_2 > que_6.java > Language Support for Java(TM) by Red Hat > que_6 > main(String[])
1 package Assignment_3_2;
2
3 public class que_6 {
4
5     Run | Debug | Run main | Debug main
6     public static void main(String[] args) {
7
8         double lengthOfTrain = 130;
9         double time = 30;
10        double speedOfTrain = 12.5;
11
12        // speed =distance/time
13        // 45km/hr = 45*1000/3600 to change m/s = 12.5
14        double length_bridge = (speedOfTrain * time) - lengthOfTrain;
15
16        System.out.println(length_bridge);
17    }
}
PROBLEMS 14 OUTPUT DEBUG CONSOLE TERMINAL PORTS SQL CONSOLE
Try the new cross-platform PowerShell https://aka.ms/pscore6
PS C:\Users\PCLP\Desktop\infobeans> & 'C:\Program Files\Java\jdk-13.0.2\bin\java.exe' '-cp' 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd48ae5dbfa9e88badd32d2b8\redhat\java\jdt_ws\infobeans_ae7c1e9\bin' 'Assignment_3_2.que_6'
245.0
PS C:\Users\PCLP\Desktop\infobeans>
Ln 8, Col 26 Spaces: 4 UTF-8 CRLF {} Java Go Live
28°C Mostly cloudy 14:18 18-09-2023
```

7. A train 125 m long passes a man, running at 5 km/hr in the same direction in which the train is going, in 10 seconds. The speed of the train is:

```
package Assignment_3_2;

public class que_7 {

    public static void main(String[] args) {

        double lengthOfTrain = 125;
        double time = 10;
        // Man's Speed = 5 km/hr = (5 * 1000) / 3600 = 5/18 m/s
        // speedofman =d/time ,,, 5/18*10

        double speedOfman = (5 * 10) / 18;

        double speedOfTrain = (lengthOfTrain + speedOfman) / time;
        // Relative Speed = (LengthofTrain + speedofman) / Time

        System.out.println(" speed of train in : " + speedOfTrain + " meters");

    }
}
```

The screenshot shows the Eclipse IDE interface with the following details:

- File Menu:** File, Edit, Selection, View, Go, ...
- Toolbar:** Standard Eclipse toolbar.
- ActionBar:** Shows tabs for que_1.java, que_2.java, que_3.java, que_4.java, que_5.java, que_7.java, and que_9.java.
- Left Sidebar (OPEN EDITORS):** Shows multiple Java files under Assignment_3_2 and Assignment_1.
- Central Editor:** Displays the content of que_7.java.
- Bottom Status Bar:** Shows indexing completed, Ln 13, Col 71, Spaces: 4, UTF-8, CRLF, Java, 29°C Partly sunny, ENG, 18-09-2023.

```
Assignment_3_2 > J que_7.java > Language Support for Java(TM) by Red Hat > que_7 > main(String[])
```

```
1 package Assignment_3_2;
2
3 public class que_7 {
4
5     Run | Debug | Run main | Debug main
6     public static void main(String[] args) {
7
8         double lengthOfTrain = 125;
9         double time = 10;
10        double speedOfMan = (5 * 10) / 18;
11
12        double speedOfTrain = (lengthOfTrain + speedOfMan) / time;
13
14        System.out.println(" speed of train in : " + speedOfTrain + " meters");
15    }
16}
```

PROBLEMS: 14, OUTPUT, DEBUG CONSOLE, TERMINAL, PORTS, SQL CONSOLE

Run: que_5, Run: que_6, Run: que_7

```
package Assignment_3_2;

public class que_9 {

    public static void main(String[] args) {

        int a = 26, b = 24, c = 10;

        int s = (a + b + c) / 2;

        double area = Math.sqrt(s * (s - a) * (s - b) * (s - c));

        System.out.println(s);
        System.out.println("area of triangle : " + area);

    }
}
```

The screenshot shows the Eclipse IDE interface with the following details:

- File Menu:** File, Edit, Selection, View, Go, ...
- Toolbar:** Standard Eclipse toolbar.
- ActionBar:** Shows tabs for que_2.java, que_3.java, que_4.java, que_5.java, que_7.java, and que_9.java.
- Left Sidebar (OPEN EDITORS):** Shows multiple Java files under Assignment_3_2 and Assignment_2.pdf.
- Central Editor:** Displays the content of que_9.java.
- Bottom Status Bar:** Shows indexing completed, Ln 14, Col 56, Spaces: 4, UTF-8, CRLF, Java, 28°C Partly sunny, ENG, 15:01, 18-09-2023.

```
Assignment_3_2 > J que_9.java > Language Support for Java(TM) by Red Hat > que_9 > main(String[])
```

```
1 package Assignment_3_2;
2
3 public class que_9 {
4
5     Run | Debug | Run main | Debug main
6     public static void main(String[] args) {
7
8         int a = 26, b = 24, c = 10;
9
10        int s = (a + b + c) / 2;
11
12        double area = Math.sqrt(s * (s - a) * (s - b) * (s - c));
13
14        System.out.println(s);
15        System.out.println("area of triangle : " + area);
16    }
17}
```

PROBLEMS: 15, OUTPUT, DEBUG CONSOLE, TERMINAL, PORTS, SQL CONSOLE

Try the new cross-platform PowerShell <https://aka.ms/pscore6>

```
PS C:\Users\PCLP\Desktop\infobeans> & 'C:\Program Files\Java\jdk-13.0.2\bin\java.exe' '-cp' 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd48ae5dbfa9e88bddd32d2b8\redhat\java\jdt_ws\infobeans_ade7c1e9\bin' 'Assignment_3_2.que_9'
30
area of triangle : 120.0
PS C:\Users\PCLP\Desktop\infobeans>
```

Run: que_5, Run: que_6, Run: que_7, Run: que_9

```
package Assignment_3_2;

public class que_10 {

    public static void main(String[] args) {

        int perimeter_of_triangle = 28;
        float inradius = 2.5f;

        float area = (inradius * perimeter_of_triangle) / 2f;

        System.out.println("Area of triangle : " + area);
    }
}
```

The screenshot shows the Microsoft Visual Studio Code (VS Code) interface. The left sidebar contains the Explorer, showing various Java files like que_1.java, que_2.java, que_3.java, que_4.java, que_5.java, que_7.java, que_9.java, and que_10.java. The INFOBEANS section lists que_3.java, que_7.java, and que_9.java. The center pane displays the Java code for que_10.java. The bottom right pane shows a terminal window with the output of running the program, which calculates the area of a triangle with a perimeter of 28 and an inradius of 2.5, resulting in an area of 35.0. The bottom status bar shows the file path C:\Users\PCLP\Desktop\infobeans\que_10.java, line 12, column 56, and other system information.

```
Assignment_3_2 > J que_10.java > Language Support for Java(TM) by Red Hat > que_10 > main(String[])
1 package Assignment_3_2;
2
3 public class que_10 {
4
5     public static void main(String[] args) {
6
7         int perimeter_of_triangle = 28;
8         float inradius = 2.5f;
9
10        float area = (inradius * perimeter_of_triangle) / 2f;
11
12        System.out.println("Area of triangle : " + area);
13    }
14 }
```

```
Try the new cross-platform PowerShell https://aka.ms/pscore6
PS C:\Users\PCLP\Desktop\infobeans> & 'C:\Program Files\Java\jdk-13.0.2\bin\java.exe' '-cp' 'C
:Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd48ae5dbfa9e88bddd32d2b8\redhat
.java\jdt_ws\infobeans_ade7c1e9\bin' 'Assignment_3_2.que_10'
Area of triangle : 35.0
PS C:\Users\PCLP\Desktop\infobeans>
```

```

package Assignment_3_2;

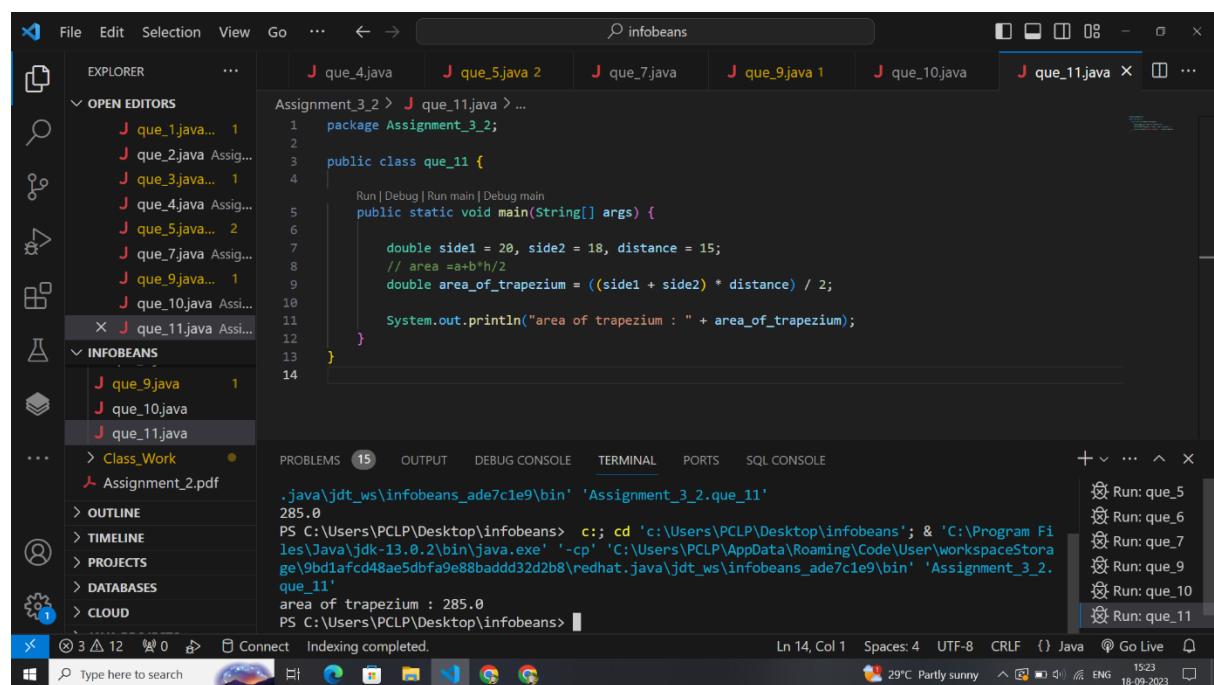
public class que_11 {

    public static void main(String[] args) {

        double side1 = 20, side2 = 18, distance = 15;
        // area =a+b*h/2
        double area_of_trapezium = ((side1 + side2) * distance) / 2;

        System.out.println("area of trapezium : " + area_of_trapezium);
    }
}

```



```

package Assignment_3_2;

public class que_12 {

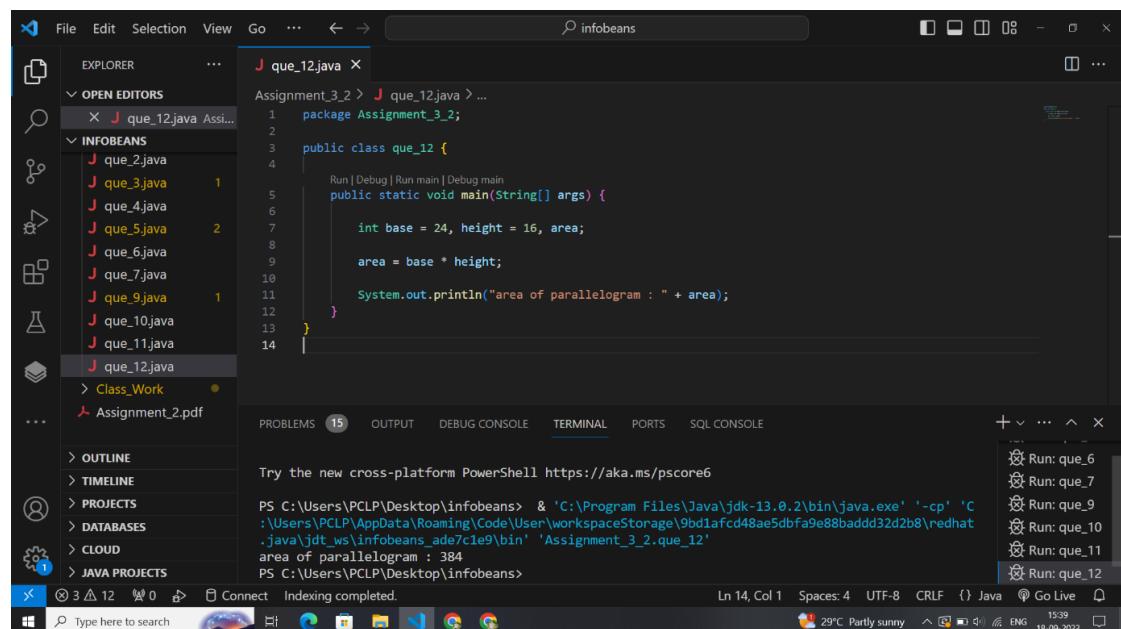
    public static void main(String[] args) {

        int base = 24, height = 16, area;

        area = base * height;

        System.out.println("area of parallelogram : " + area);
    }
}

```



```

package Assignment_3_2;

public class que_13 {

    public static void main(String[] args) {
        double breadth, area = 876;
        // double length = 3 * breadth;

        // area = 3 * breadth * breadth;
        breadth = Math.sqrt(area / 3);

        System.out.println("breadth of rectangular plot :" + breadth);
    }
}

```

The screenshot shows the Microsoft Visual Studio Code interface. The left sidebar displays a file tree with several Java files under 'OPEN EDITORS' and 'INFOBEANS'. The main editor area shows the content of 'que_13.java'. The terminal at the bottom shows the output of running the code, which calculates the breadth of a rectangular plot. The status bar at the bottom right shows system information like temperature, battery level, and date.

```
Assignment_3_2 > que_13.java > ...
1 package Assignment_3_2;
2
3 public class que_13 {
4
5     public static void main(String[] args) {
6         double breadth, area = 876;
7         // double length = 3 * breadth;
8
9         // area = 3 * breadth * breadth;
10        breadth = Math.sqrt(area / 3);
11
12        System.out.println("breadth of rectangular plot :" + breadth);
13    }
14
15 }
16
```

PROBLEMS 15 OUTPUT DEBUG CONSOLE TERMINAL PORTS SQL CONSOLE

Try the new cross-platform PowerShell <https://aka.ms/pscore6>

```
PS C:\Users\PCLP\Desktop\infobeans> & 'C:\Program Files\Java\jdk-13.0.2\bin\java.exe' '-cp' 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afc48ae5dbfa9e88baddd32d2b8\redhat\.java\jdt_ws\infobeans_ae7c1e9\bin' 'Assignment_3_2.que_13'
breadth of rectangular plot :17.08800749063506
PS C:\Users\PCLP\Desktop\infobeans>
```

Ln 16, Col 1 Spaces: 4 UTF-8 CRLF {} Java Go Live

29°C Partly sunny ENG 15:52 18-09-2023

```
package Assignment_3_2;

public class que_16 {

    public static void main(String[] args) {
        double buying = 900, selling = 1080, profit, gain_per;

        profit = selling - buying;
        // Profit % = Profit/Cost Price * 100.

        gain_per = (profit / buying) * 100;

        System.out.println("Gain percentage :" + gain_per);
    }
}
```

The screenshot shows the Eclipse IDE interface. The left sidebar displays a file tree under 'INFOBEANS' containing various Java files like que_4.java through que_16.java. The central editor window shows the code for 'que_16.java'. The code calculates profit percentage based on buying and selling prices. Below the editor is a terminal window showing the command-line output of running the program. The bottom status bar shows system information such as temperature, battery level, and date.

```
Assignment_3_2 > J que_16.java > Language Support for Java(TM) by Red Hat > que_16 > main(String[])
1 package Assignment_3_2;
2
3 public class que_16 {
4
5     Run | Debug | Run main | Debug main
6     public static void main(String[] args) {
7         double buying = 900, selling = 1080, profit, gain_per;
8
9         profit = selling - buying;
10        // Profit % = Profit/Cost Price * 100.
11
12        gain_per = (profit / buying) * 100;
13
14        System.out.println("Gain percentage :" + gain_per);
15    }
16
```

PROBLEMS 12 OUTPUT DEBUG CONSOLE TERMINAL PORTS SQL CONSOLE

```
PS C:\Users\PCLP\Desktop\infobeans> c::; cd 'C:\Users\PCLP\Desktop\infobeans'; & 'C:\Program Files\Java\jdk-13.0.2\bin\java.exe' '-cp' 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd48ae5dbfa9e88baddir32d2b8\redhat.java\jdt_ws\infobeans_ae7c1e9\bin' 'Assignment_3_2.que_16'
20.0
PS C:\Users\PCLP\Desktop\infobeans> Gain percentage :20.0
PS C:\Users\PCLP\Desktop\infobeans>
```

Ln 14, Col 6 Spaces: 4 UTF-8 CRLF {} Java Go Live 16:19 29°C Partly sunny ENG 18-09-2023

```
package Assignment_3_2;

public class que_17 {

    public static void main(String[] args) {

        double cost = 1500, sold = 1230, loss, loss_per;
        // loss
        loss = cost - sold;

        // loss per = loss/c.p*100
        loss_per = (loss / cost) * 100;
    }

}
```

```
package Assignment_3_2;

public class que_18 {

    public static void main(String[] args) {

        // volume of cube = a*a*a, surface area of cube = 6 a*a;
        double volume_cube = 1728, surface_area;
        double sideLength = Math.cbrt(volume_cube);

        surface_area = 6 * Math.pow(sideLength, 2);

        System.out.println("Surface area of cube :" + surface_area);

    }
}
```

```

package Assignment_3_2;

public class que_19 {

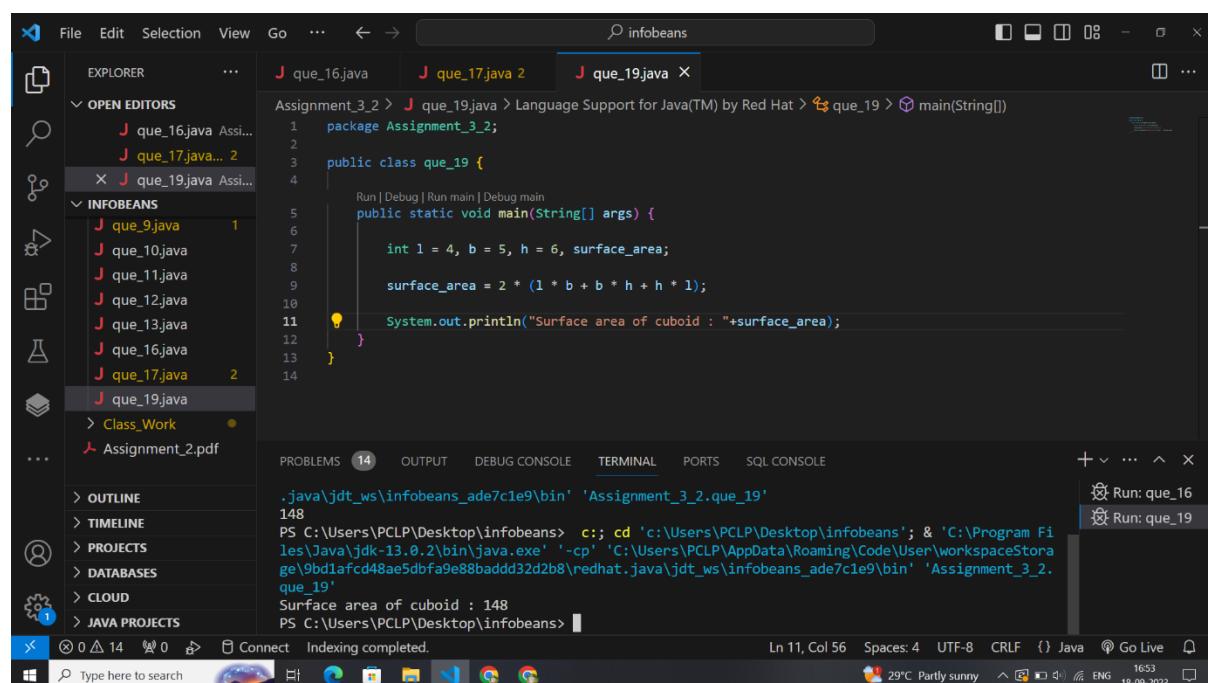
    public static void main(String[] args) {

        int l = 4, b = 5, h = 6, surface_area;

        surface_area = 2 * (l * b + b * h + h * l);

        System.out.println("Surface area of cuboid : "+surface_area);
    }
}

```



```

package Assignment_3_2;

public class que_20 {

    public static void main(String[] args) {

        int l = 4, b = 5, h = 6, volume;

        volume = l * b * h;

        System.out.println("Volume of cuboid : " + volume);
    }
}

```

The screenshot shows a Java development environment with the following details:

- File Explorer:** Shows multiple Java files: que_16.java, que_17.java, que_19.java, and que_20.java.
- Code Editor:** The current file is que_20.java, which contains the following code:

```
Assignment_3_2 > J que_20.java > Language Support for Java(TM) by Red Hat > que_20 > main(String[])
1 package Assignment_3_2;
2
3 public class que_20 {
4
5     Run | Debug | Run main | Debug main
6     public static void main(String[] args) {
7
8         int l = 4, b = 5, h = 6, volume;
9
10        volume = l * b * h;
11
12        System.out.println("Volume of cuboid : " + volume);
13    }
14}
```
- Terminal:** The terminal window shows the output of running que_20.java:

```
.java\jdt_ws\infobeans_ae7c1e9\bin' 'Assignment_3_2.que_20'
120
PS C:\Users\PCLP\Desktop\infobeans> cd 'c:\Users\PCLP\Desktop\infobeans'; & 'C:\Program Files\Java\jdk-13.0.2\bin\java.exe' '-cp' 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\b9bd1afcd48ae5dbfa9e88baddir32d2b8\redhat.java\jdt_ws\infobeans_ae7c1e9\bin' 'Assignment_3_2.que_20'
Volume of cuboid : 120
PS C:\Users\PCLP\Desktop\infobeans>
```
- Run Configuration:** A dropdown menu shows options to run que_16, que_19, que_20, and que_21.

The screenshot shows a Java development environment with the following details:

- File Explorer:** Shows multiple Java files: que_20.java, que_21.java, que_10.java, que_11.java, que_12.java, que_13.java, que_16.java, que_17.java, que_19.java, que_20.java, que_21.class, and que_21.java.
- Code Editor:** The current file is que_21.java, which contains the following code:

```
Assignment_3_2 > J que_21.java > Language Support for Java(TM) by Red Hat > que_21 > main(String[])
1 package Assignment_3_2;
2
3 public class que_21 {
4
5     Run | Debug | Run main | Debug main
6     public static void main(String[] args) {
7
8         // h =2*a/b
9
10        int base = 40, area = 400, height;
11
12        height = 2 * (area / base);
13
14        System.out.println("Height of a triangle : " + height);
15    }
16}
```
- Terminal:** The terminal window shows the output of running que_21.java:

```
PS C:\Users\PCLP\Desktop\infobeans> & 'C:\Program Files\Java\jdk-13.0.2\bin\java.exe' '-cp' 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\b9bd1afcd48ae5dbfa9e88baddir32d2b8\redhat.java\jdt_ws\infobeans_ae7c1e9\bin' 'Assignment_3_2.que_21'
Height of a triangle : 20
PS C:\Users\PCLP\Desktop\infobeans>
```
- Run Configuration:** A dropdown menu shows options to run que_16, que_19, que_20, and que_21.

```

package Assignment_3_2;

public class que_22 {

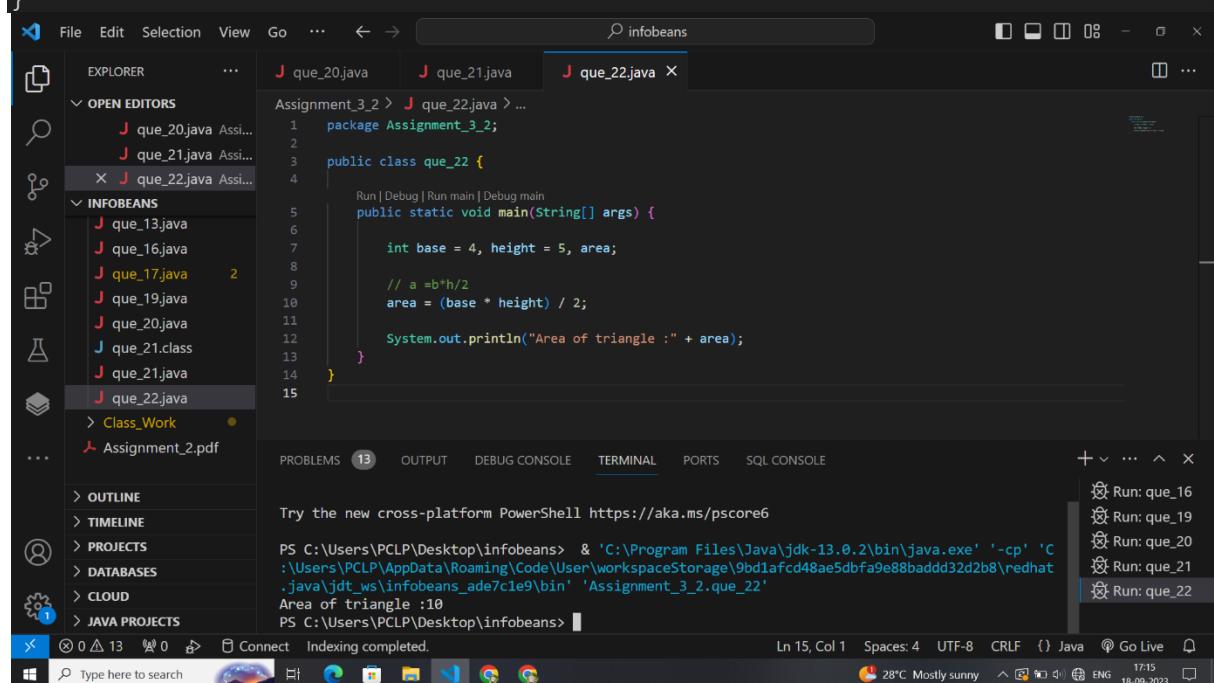
    public static void main(String[] args) {

        int base = 4, height = 5, area;

        // a = b*h/2
        area = (base * height) / 2;

        System.out.println("Area of triangle :" + area);
    }
}

```



```

package Assignment_3_2;
public class que_23 {
    public static void main(String[] args) {
        double a = 1, b = 2, c = 3, area1;
        double s = (a + b + c) / 2;
        area1 = Math.sqrt(s * (s - a) * (s - b) * (s - c));
        System.out.println(s);
        System.out.println("area of triangle : " + area1);
    }
}

```

The screenshot shows a Java code editor with the file `que_23.java` open. The code calculates the area of a triangle using Heron's formula, but it contains a mistake where the semi-perimeter `s` is calculated as `(a + b + c) / 2` instead of `(a + b + c) / 2.0`. The output window shows the result as `NaN`.

```
Assignment_3_2 > J que_23.java > Language Support for Java(TM) by Red Hat > que_23 > main(String[])
1 package Assignment_3_2;
2
3 public class que_23 {
4
5     public static void main(String[] args) {
6
7         double a = 1, b = 2, c = 3, areal;
8
9         double s = (a + b + c) / 2;
10
11         areal = Math.sqrt(s * (s - a) * (s - b) * (s - c));
12
13         System.out.println(s);
14         System.out.println("area of triangle : " + areal);
15     }
16
17 }
```

PROBLEMS 13 OUTPUT DEBUG CONSOLE TERMINAL PORTS SQL CONSOLE Run: que_23

```
package Assignment_3_2;
public class que_24 {
    public static void main(String[] args) {
        // Base2 + height2 = hypotenuse2
        // Area of triangle = 1/2 × base × height
        double base = 8, hypotenuse = 10, area, height;
        height = Math.sqrt(hypotenuse * hypotenuse - base * base);
        area = (base * height) / 2;
        System.out.println("Height of triangle :" + height);
        System.out.println("Area of right triangle : " + area);

    }
}
```

The screenshot shows a Java code editor with the file `que_24.java` open. The code calculates the height and area of a right-angled triangle given the base and hypotenuse. The output window shows the correct results: height 6.0 and area 24.0.

```
Assignment_3_2 > J que_24.java > Language Support for Java(TM) by Red Hat > que_24 > main(String[])
1 package Assignment_3_2;
2
3 public class que_24 {
4
5     public static void main(String[] args) {
6
7         // Base2 + height2 = hypotenuse2
8         // Area of triangle = 1/2 × base × height
9         double base = 8, hypotenuse = 10, area, height;
10
11         height = Math.sqrt(hypotenuse * hypotenuse - base * base);
12
13         area = (base * height) / 2;
14         System.out.println("Height of triangle :" + height);
15         System.out.println("Area of right triangle : " + area);
16
17 }
```

PROBLEMS 13 OUTPUT DEBUG CONSOLE TERMINAL PORTS SQL CONSOLE Run: que_23 Run: que_24

```

package Assignment_3_2;

public class que_25 {

    public static void main(String[] args) {
        // A=Math.sqrt(3/4a2

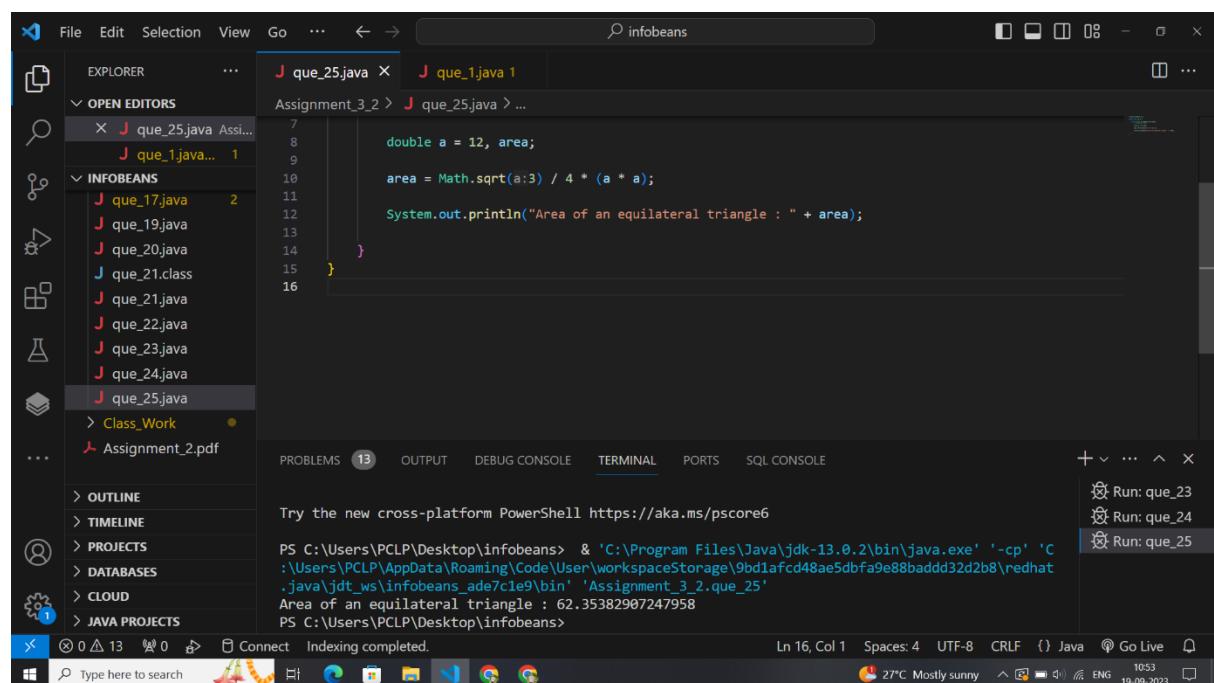
        double a = 12, area;

        area = Math.sqrt(3) / 4 * (a * a);

        System.out.println("Area of an equilateral triangle : " + area);

    }
}

```



```

package Assignment_3_2;

public class que_26 {

    public static void main(String[] args) {
        int l = 30, b = 20, h = 8, volume;

        // Volume of a cuboid = l * b * h
        volume = l * b * h;

        System.out.println("Volume of cuboid:" + volume);

    }
}

```

The screenshot shows an IDE interface with the title bar "infobeans". The left sidebar includes icons for Explorer, Open Editors, InfoBeans, Outline, Timeline, Projects, Databases, Cloud, and Java Projects. The Open Editors section lists "que_25.java", "que_26.java", and "que_1.java". The main editor window displays the following Java code:

```
Assignment_3_2 > J que_26.java > Language Support for Java(TM) by Red Hat > que_26 > main(String[])
1 package Assignment_3_2;
2
3 public class que_26 {
4
5     Run | Debug | Run main | Debug main
6     public static void main(String[] args) {
7         int l = 30, b = 20, h = 8, volume;
8
9         // Volume of a cuboid = l * b * h
10        volume = l * b * h;
11
12        System.out.println("Volume of cuboid:" + volume);
13    }
14
15 }
```

The Problems, Output, Debug Console, Terminal, Ports, and SQL Console tabs are visible at the bottom. The Terminal tab shows the command "age\bdb1afcd48ae5dbfa9e88badd32d2b8\redhat.java\jdt_ws\infobeans_ade7c1e9\bin' 'Assignment_3_2 .que_26'" and the output "Volume of cuboid:4800PS C:\Users\PCLP\Desktop\infobeans>". The status bar at the bottom right shows "27°C Mostly sunny" and the date "19-09-2023".

```
package Assignment_3_2;

public class que_27 {
    public static void main(String[] args) {
        double s1 = 125, s2 = 64, perimeter;
        // 5 times (area_square) = a*a,,, = area of reactangle
        // area of reactangle=l*b
        // perimeter of square =4a
        double area_square = 5 * (s1 * s2);

        double perimeter_square = 4 * Math.sqrt(area_square);
        // System.out.println("area of square :" + area_square);
        System.out.println("perimwter of square : " + perimeter_square);
    }
}
```

The screenshot shows an IDE interface with the title bar "infobeans". The left sidebar includes icons for Explorer, Open Editors, InfoBeans, Outline, Timeline, Projects, Databases, Cloud, and Java Projects. The Open Editors section lists "que_25.java", "que_26.java", "que_27.java", and "que_1.java". The main editor window displays the following Java code:

```
J que_27.java > Language Support for Java(TM) by Red Hat > que_27 > main(String[])
1
2 public class que_27 {
3
4     Run | Debug | Run main | Debug main
5     public static void main(String[] args) {
6
7         double s1 = 125, s2 = 64, perimeter;
8
9         // 5 times (area_square) = a*a,,, = area of reactangle
10        // area of reactangle=l*b
11        // perimeter of square =4a
12        double area_square = 5 * (s1 * s2);

13        double perimeter_square = 4 * Math.sqrt(area_square);
14        // System.out.println("area of square :" + area_square);
15        System.out.println("perimwter of square : " + perimeter_square);
16
17 }
```

The Problems, Output, Debug Console, Terminal, Ports, and SQL Console tabs are visible at the bottom. The Terminal tab shows the command "PS C:\Users\PCLP\Desktop\infobeans> c:; cd 'c:\Users\PCLP\Desktop\infobeans'; & 'C:\Program Files\Java\jdk-13.0.2\bin\java.exe' '-cp' 'C:\Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\bdb1afcd48ae5dbfa9e88badd32d2b8\redhat.java\jdt_ws\infobeans_ade7c1e9\bin' 'que_27'" and the output "area of square :40000.0 perimwter of square : 160000.0 PS C:\Users\PCLP\Desktop\infobeans>". The status bar at the bottom right shows "27°C Mostly sunny" and the date "19-09-2023".

```

package Assignment_3_2;

public class que_40 {

    public static void main(String[] args) {

        // volume of cube =a*a*a;
        // volume of cube =N*volume of small cube
        int side_cube = 100, side_small_cube = 10, N;

        int volume_cube = side_cube * side_cube * side_cube;

        int volume_small_cube = side_small_cube * side_small_cube * side_small_cube;

        // volume_cube= N*volume_small_cube;
        N = volume_cube / volume_small_cube;

        System.out.println("total small cubes are obtained : " + N);
    }
}

```

The screenshot shows the Red Hat Language Support for Java interface. The left sidebar displays a tree view of files and projects, with 'que_40.java' selected. The main area is a code editor showing the provided Java code. Below the editor is a terminal window displaying the command-line output of running the program. The bottom status bar shows system information like battery level, signal strength, and date/time.

```

J que_25.java J que_26.java J que_27.java 2 J que_40.java X J que_1.java 1
File Edit Selection View Go ... ← → ⌂ infobeans
EXPLORER OPEN EDITORS INFOBEANS ...
J que_25.java Ass... J que_26.java Ass... J que_27.java 2 J que_40.java X J que_1.java 1
J que_25.java Ass... J que_26.java Ass... J que_27.java 2 J que_40.java X J que_1.java 1
Run | Debug | Run main | Debug main
2 public class que_40 {
3
4     // volume of cube =a*a*a;
5     // volume of cube =N*volume of small cube
6     int side_cube = 100, side_small_cube = 10, N;
7
8     int volume_cube = side_cube * side_cube * side_cube;
9
10    int volume_small_cube = side_small_cube * side_small_cube * side_small_cube;
11
12    // volume_cube= N*volume_small_cube;
13    N = volume_cube / volume_small_cube;
14
15    System.out.println("total small cubes are obtained : " + N);
16
17
18
PROBLEMS 15 OUTPUT DEBUG CONSOLE TERMINAL PORTS SQL CONSOLE
Try the new cross-platform PowerShell https://aka.ms/pscore6
PS C:\Users\PCLP\Desktop\infobeans> & 'C:\Program Files\Java\jdk-13.0.2\bin\java.exe' '-cp' 'C:
:Users\PCLP\AppData\Roaming\Code\User\workspaceStorage\9bd1afcd48ae5dbfa9e88baddd32d2b8\redhat
.java\jdt_ws\infobeans_ae7c1e9\bin' 'que_40'
total small cubes are obtained : 1000
PS C:\Users\PCLP\Desktop\infobeans>
Ln 17, Col 67 Spaces: 4 UTF-8 CRLF {} Java ⚡ Go Live ⌂
Very high UV ⌂ ENG 12:13 19-09-2023
Type here to search

```



```
package Assignment_3_2;

public class que_41 {

    public static void main(String[] args) {

        int chair1 = 2, table1 = 3, total1 = 1300;
        int chair2 = 3, tables2 = 2, total2 = 1200;

        int final1 = chair1 + table1;
        int final2 = chair2 + tables2;
        int final3 = (final2) - (final1);

        int total = (total1) - (total2);

        System.out.println("chair : " + final3 + " total number of chairs are : " + total);
    }
}
```