

Solutions

Each answer shows the steps, then the **result**.

2.1

- the file might not exist, and Java requires that possible exception to be declared or handled

2.2

- "Ana", "82", "7.5"
- "Ben"

2.3

- {"7", "May", "2026"}
- length 3

2.4

- an **InputMismatchException** is thrown: 8.0 is not an int

3.1 C

- three tokens read as ints: $5 + 9 + 2 = 16$

3.2 B

- an **ArrayList** grows as values are added

3.3 C

- nextInt()** reads 3 and stops; **nextLine()** returns the rest of line 1, which is empty

3.4

(a)

```
public static ArrayList<Integer> readMarks() throws IOException
{
    ArrayList<Integer> marks = new ArrayList<Integer>();
    Scanner in = new Scanner(new File("marks.txt"));
    while (in.hasNext())
    {
        String[] parts = in.nextLine().split(",");
        marks.add(Integer.parseInt(parts[1]));
    }
    in.close();
    return marks;
}
```

- creates an empty **ArrayList<Integer>** and a **Scanner** on the file
- loops while **hasNext()** and reads each line with **nextLine()**
- splits on ",", and converts **parts[1]** with **Integer.parseInt**

- adds each mark and returns the list after the loop

(b)

- an **exception** is thrown (a **NumberFormatException**)
- Integer.parseInt("absent")** cannot convert a word to an **int**, so the method stops there