CDAC Mumbai PG-DAC August 24

Assignment No- 5

1) Write a program that demonstrates widening conversion from int to double and prints the result.

2) Create a program that demonstrates narrowing conversion from double to int and prints the result.

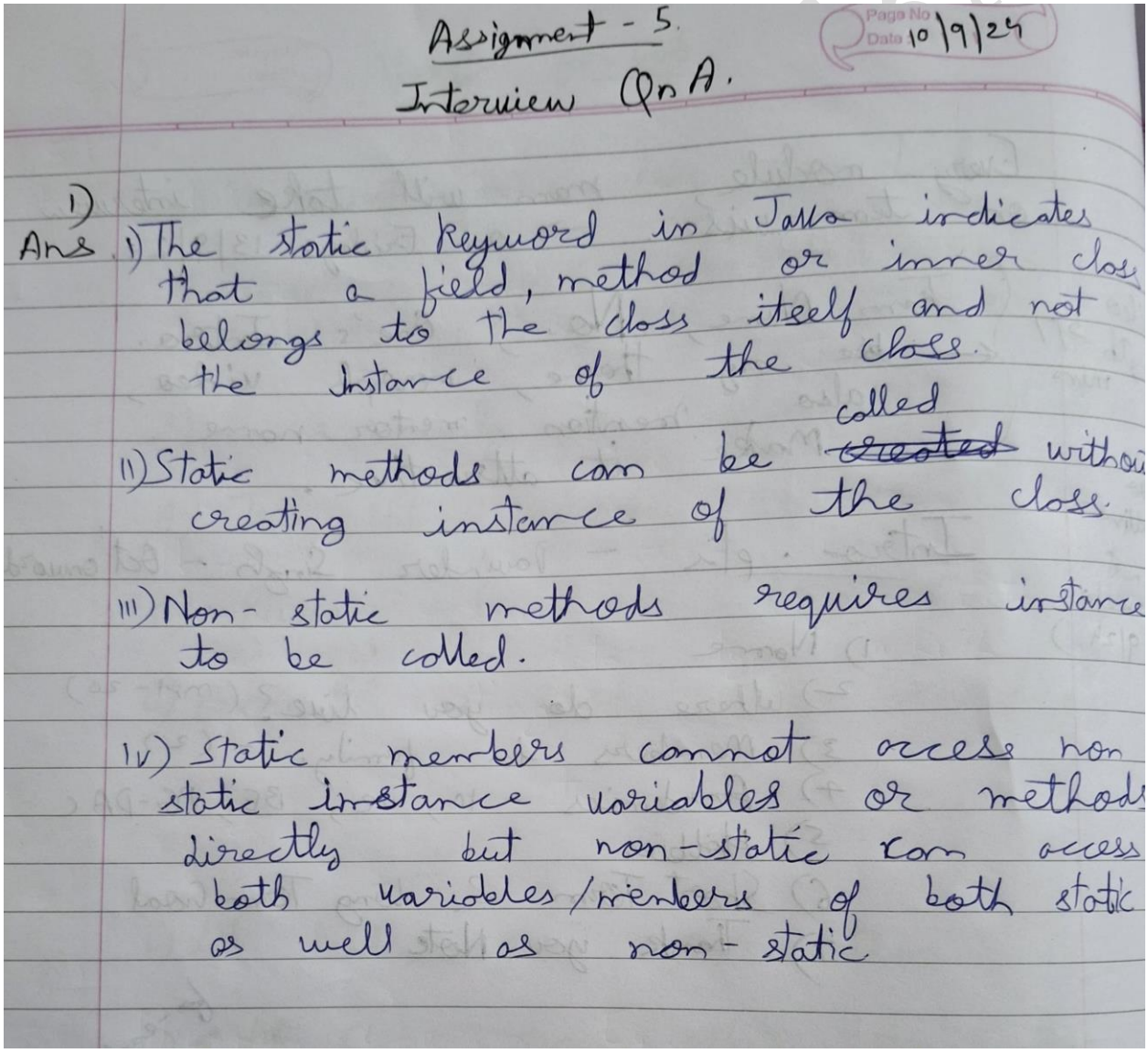
3) Write a program that performs arithmetic operations involving different data types (int, double, float) and observes how Java handles widening conversions automatically.

4) Write a Program that demonstrates widening conversion from int to (double, float, Boolean, string) and prints the result.

INTERVIEW QUESTIONS

Note: Write down this interview question on your notebook, take a screenshot & Paste that SS in the word document & upload on your Github.

1. What does the static keyword mean in Java? Explain the difference between static and non-static methods.



Assignment - 5.

Interview Qn A.

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1)

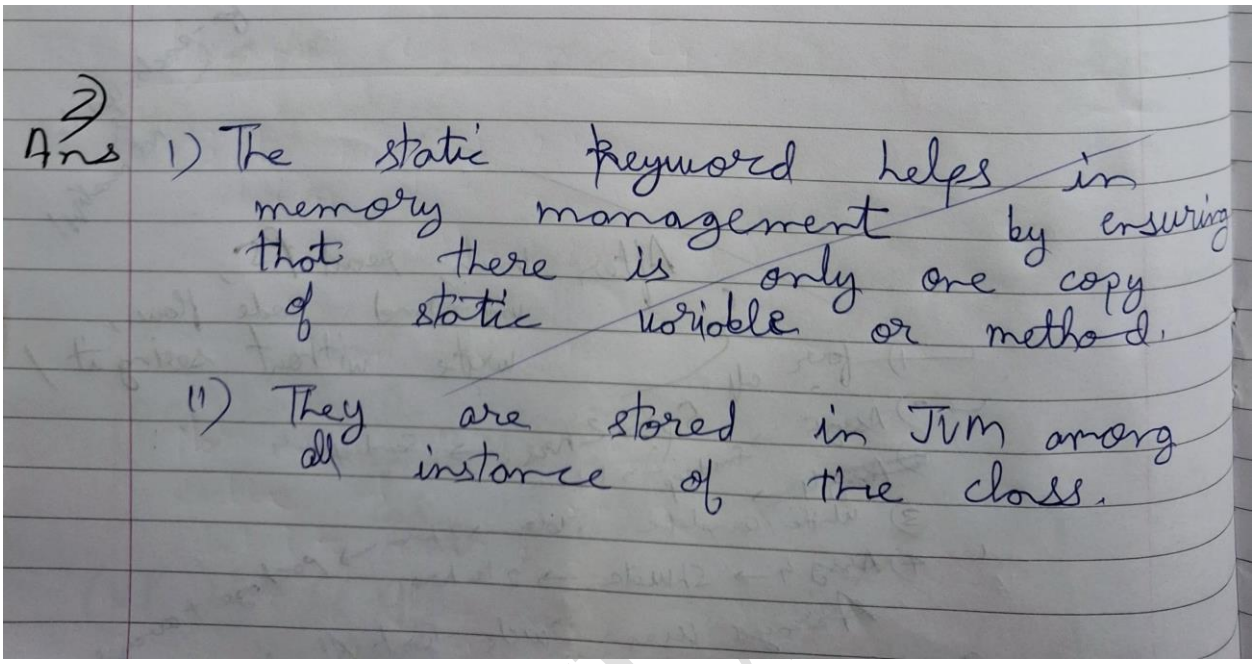
Ans i) The static keyword in Java indicates that a field, method or inner class belongs to the class itself and not the instance of the class.

ii) Static methods can be called without creating instance of the class.

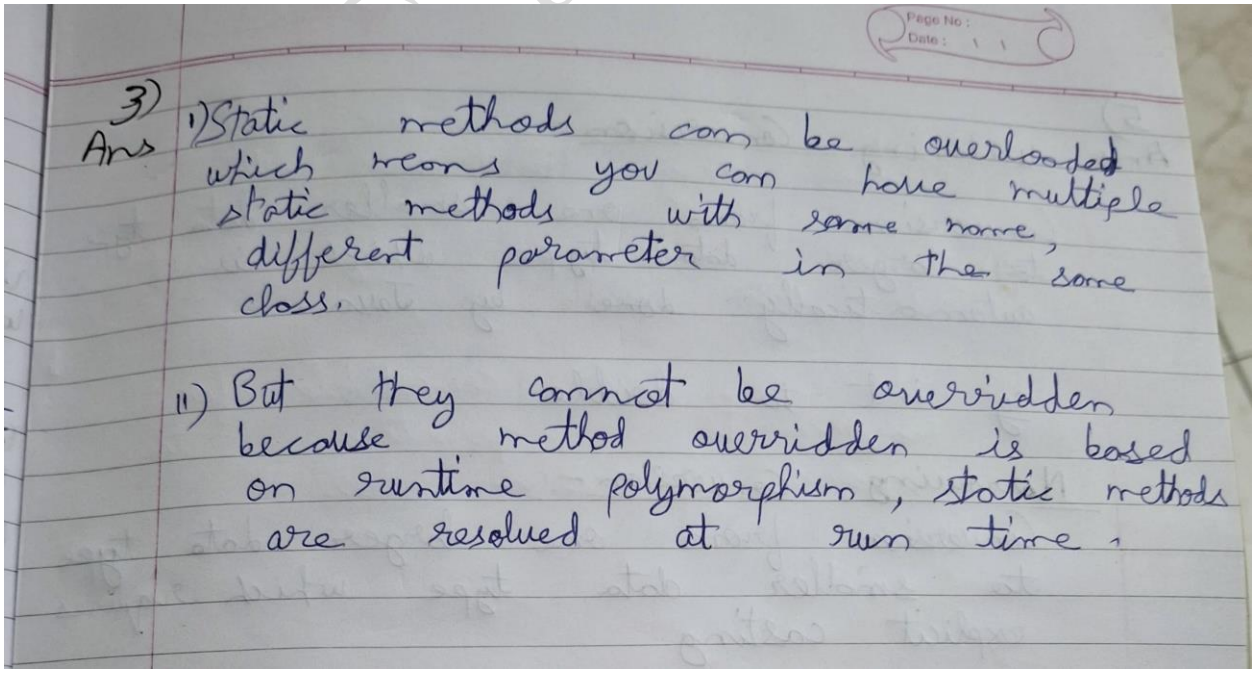
iii) Non-static methods requires instance to be called.

iv) Static members cannot access non static instance variables or methods directly but non-static can access both variables/members of both static as well as non-static

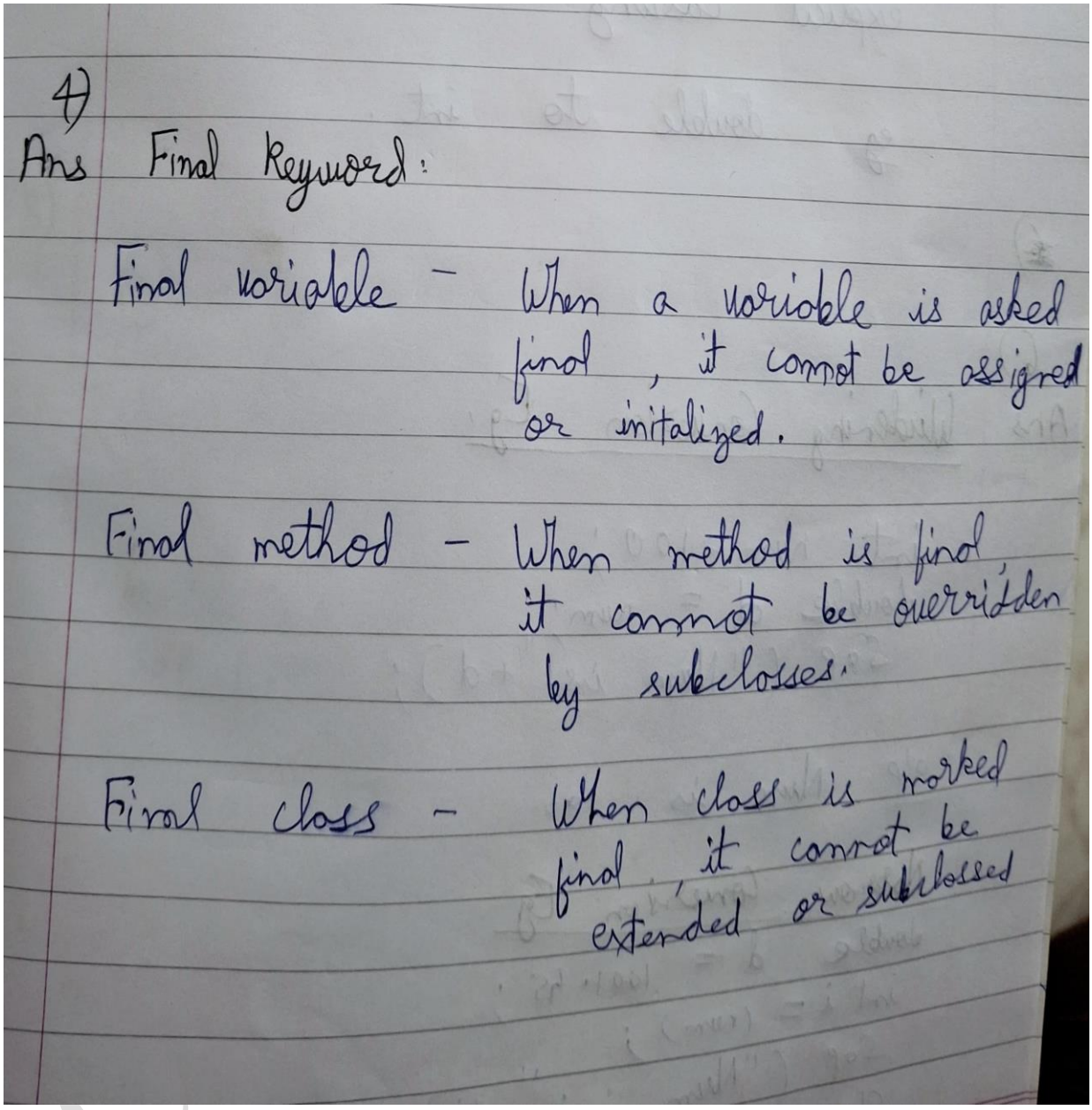
2. What is the role of the static keyword in the context of memory management.



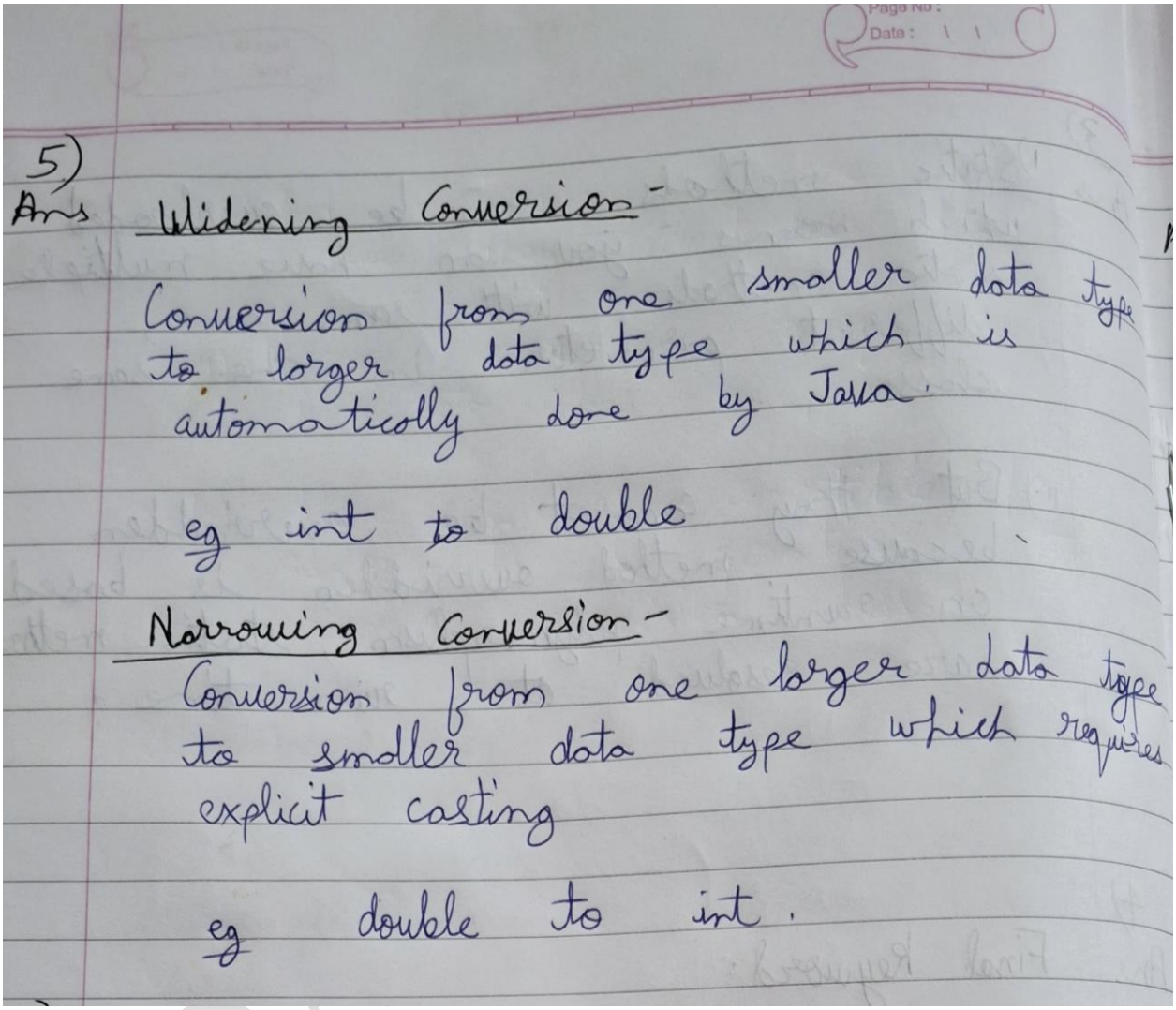
3. Can static methods be overloaded and overridden in Java? How static variables shared across multiple instances of a class?



4. What is the significance of the final keyword in Java?



5. What are narrowing and widening conversions in Java?



5)
Ans Widening Conversion -

Conversion from one smaller data type to larger data type which is automaticolly done by Java.

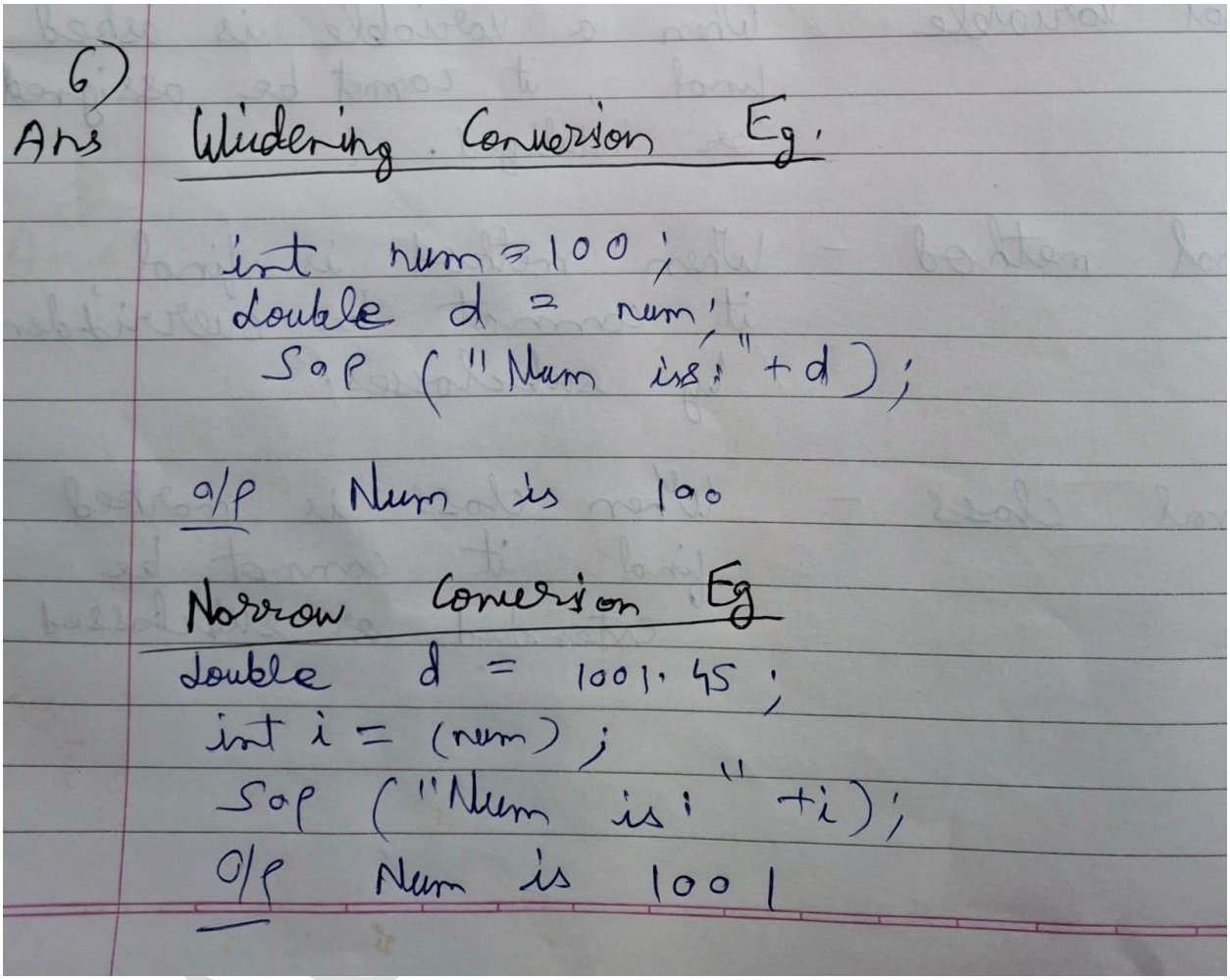
eg int to double

Narrowing Conversion -

Conversion from one larger data type to smaller data type which requires explicit casting

eg double to int.

6. Provide examples of narrowing and widening conversions between primitive data types.



6)

Ans Widening Conversion Eg:

```
int num = 100;
Double d = num;
Sop ("Num is: " + d);
```

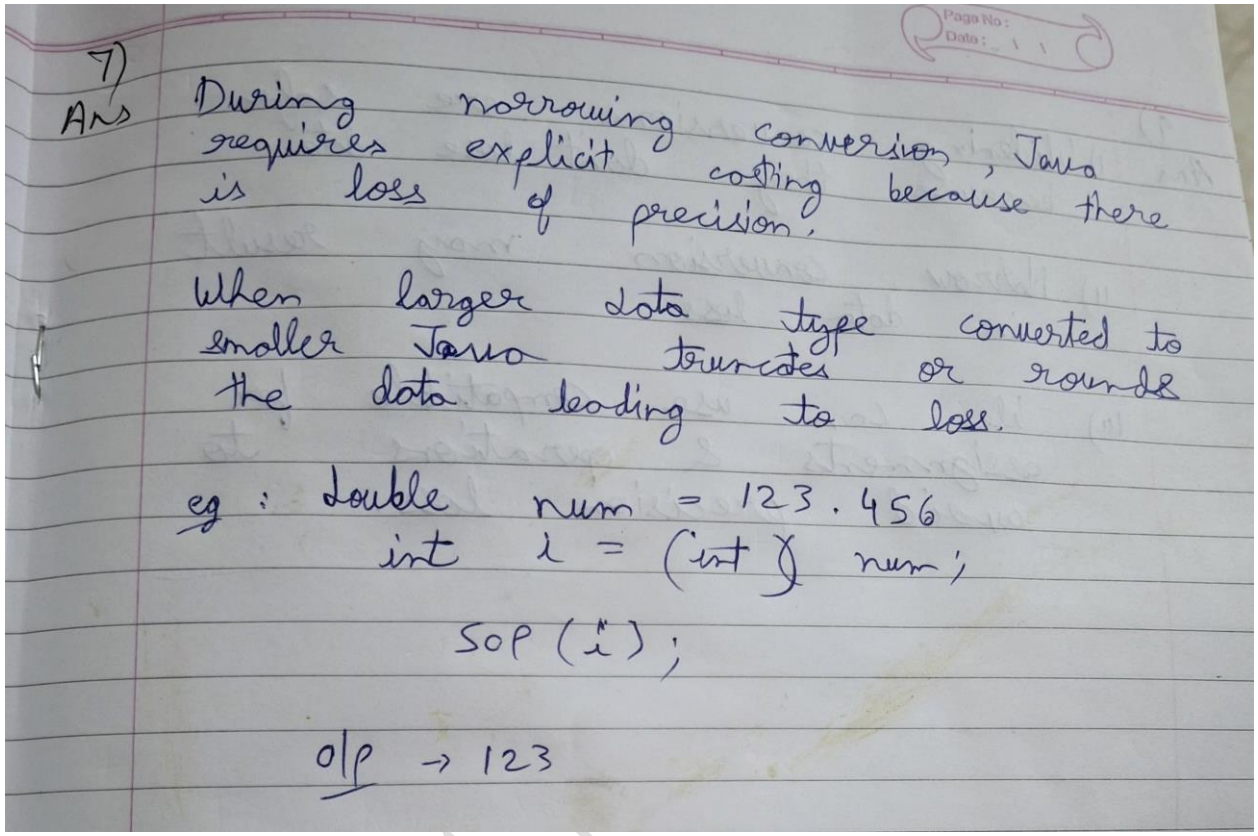
o/p Num is 100

Narrow Conversion Eg

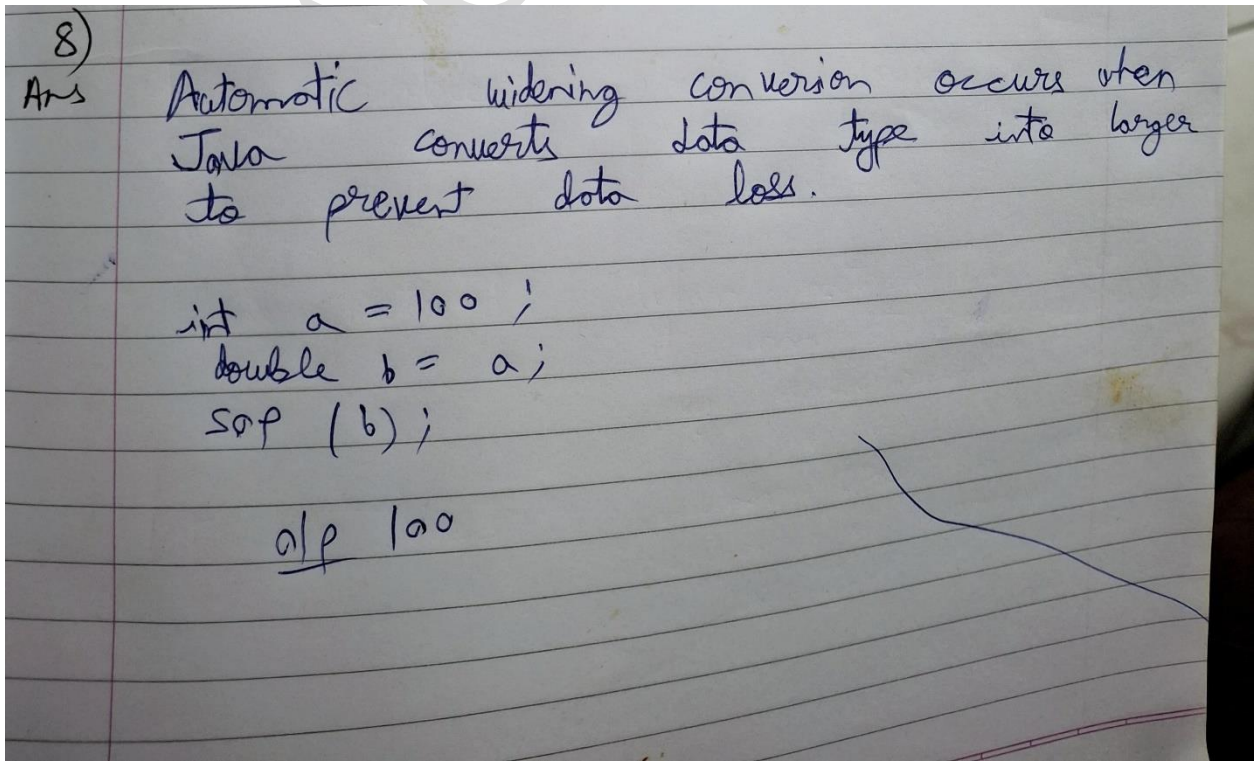
```
Double d = 1001.45;
int i = (num);
Sop ("Num is: " +i);
```

o/p Num is 1001

7. How does Java handle potential loss of precision during narrowing conversions?



8. Explain the concept of automatic widening conversion in Java.



9. What are the implications of narrowing and widening conversions on type compatibility and data loss?