Competency tests are writing code by hand. Yes, you need to use pencil (or pen) and paper. No compiler except your own brain. They ought to take each person about 15-20 minutes to finish. They are used to test your ability to think through code without the help of a compiler. And they test specific concepts. You only need to write the code snippets necessary to complete the tasks. You do not need to put in Main() unless specifically told to do so in the instructions.

CT – Variables, Constants, and Division

Demonstrate your competence in using the math operators by creating a short code segment for **each** of the following scenarios, and give example numbers and answers:

1. You have three ints called i1, i2, and i3 and you want to determine the remainders of the division of each of the numbers by 7. Give three example numbers (at least one number must be less than 7) and the answers of all 3 remainders (modulus operation). (Put the answers in comments after the divisions.)
2. You have three ints called i1, i2, and i3 and you want to determine the value of each divided by the other. Give three example numbers and the answers of all 6 divisions. (Put the answers in comments after the divisions.)
3. You have an int called i1 and a float called f1 and you want to determine what each divided by the other will be. You want to make sure that when you divide by the float, you get a float answer and when you divide by the int, you get an int answer. Give two example numbers and answers to both divisions. Declare appropriate variables in which to store the answers. (Put the answers in comments after the divisions.) Make sure that the float has a decimal value not equal to zero (i.e. 3.2 not 3.0).
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```
int i1=3, i2=11, i3=8;
int ians = i1%7; //3
ians = i2%7; // 4
```

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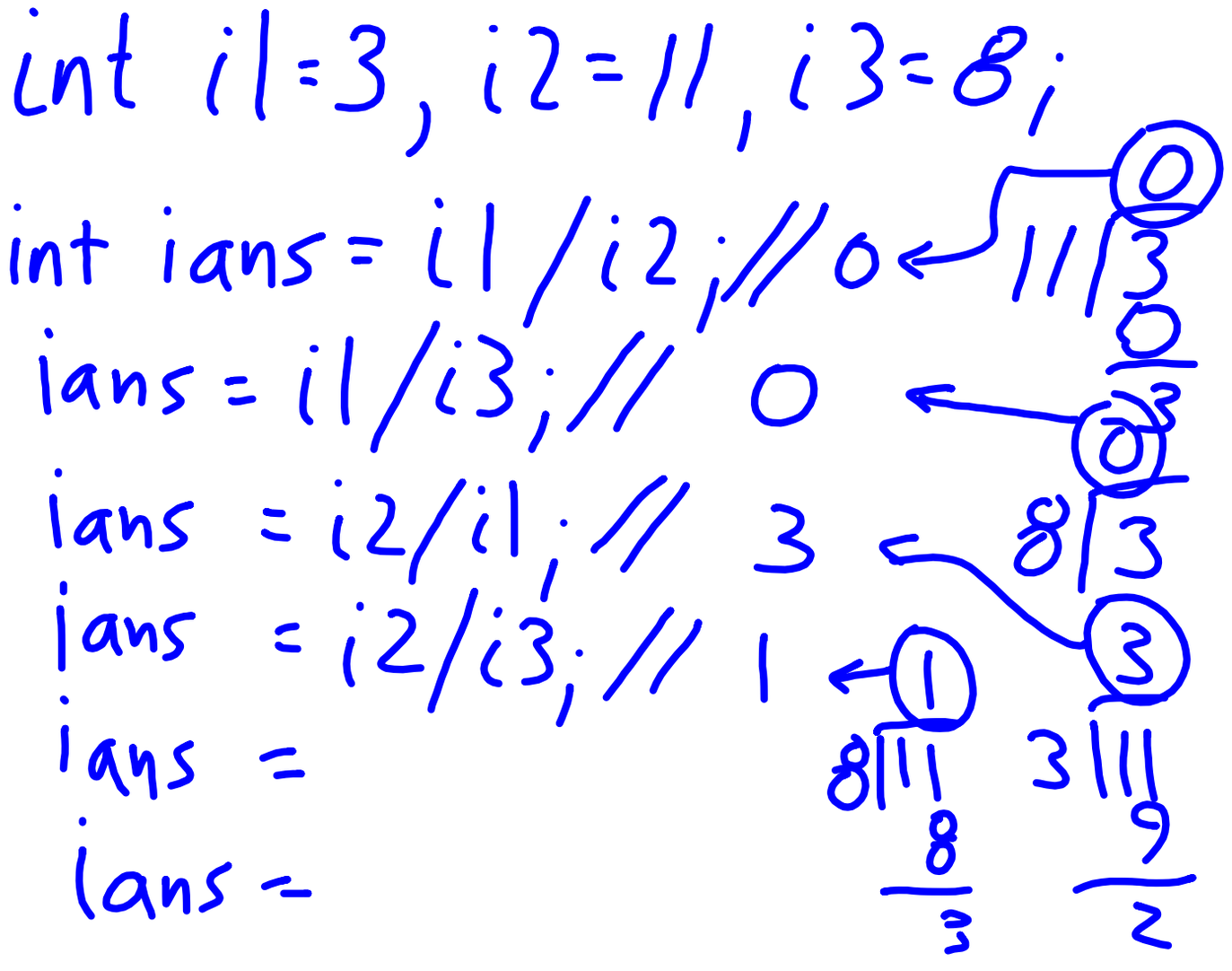

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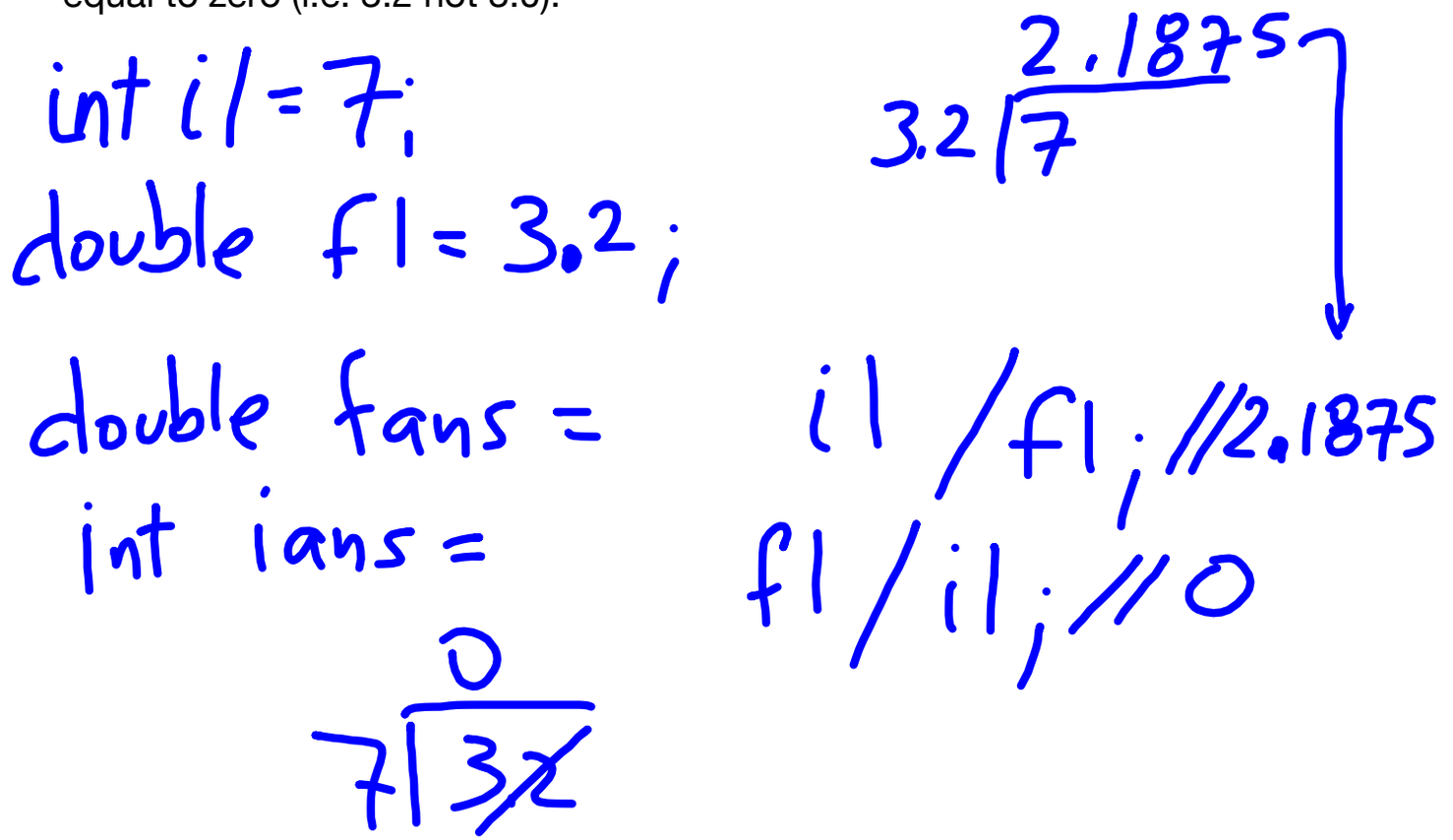

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```
int i1 = 7;
double f1 = 3.2;
int ians = i1 / (int) f1; // 2
double fans = f1 / (double) i1; // 0.45714
```