1(a) List four legal identifier names.

- length
- firstName
- Quantity3
- ch7gu

1(b) List four illegal identifier names and explain why each is illegal.

- first Name
- 3quantity
- int
- firstName

2(a) In two statements, declare a variable named numBeads and assign it the value 5
int numBeads;
numBeads = 5;

2(b) In one statements, declare a variable named numBeads and assign it the value 5
int numBeads = 5;

3(a) What is the final value of yourNumber after the last statement executes?
Int myNumber = 5;
Int yourNumber =4;
myNumber = yourNumber * 2;
yourNumber = myNumber + 5;

yourNumber = 4 → 4 * 2 = 8 → myNumber = 8
myNumber = 8 → 8 + 5 = 13 → yourNumber = 13
yourNumber = (13)

3(b) What is the final value of yourNumber after the last statement executes?
Int myNumber;
Int yourNumber = 4;
myNumber = yourNumber +7;
yourNumber =myNumber;

yourNumber = 4→ 4 + 7 =11→myNumber = 11
myNumber = 11 → 11(0) → yourNumber = 11
yourNumber = (11)

4. Determine the appropriate data type for each of the following values:

a) The number of basketballs in a department store.
   int
b) The price of a basketballs
   double

c) The number of players on a basketball team
int
d) The average age of the players on a basketball team
int
e) Whether a basketball player has received a jersey or not
int
f) The first initial of a basketball player's first name.
int

5.

a) What is the difference between a primitive data type and an abstract data type?
Primitive data type stores a single piece of data (Ex: int, double, char and boolean)
And Abstract data type data and methods for performing actions on that data.

b) What is the difference between a class and an object?

A class defines the structure and behavior that objects of its type will possess, while an object is only that one instance of that definition of the class.

11. Using the following declarations, rewrite the statements to include the appropriate type casting, rounding where necessary. If type casting is not necessary, explain why:

```
Int j = 5;
double k = 1.6;
Int y;
Double z;
```

a) y = j * k
b) z = j * k

1. Y = 5 * 1.6 =8
2. Z = 5 * 1.6 =8.0