2. **a) In two statements, declare a variable named numBeads and assign it the value 5.**
Int numBeads; numBeads = 5
b) In one statement, 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?** 15.
b) What is the final value of yourNumber after the last statement executes? 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 basketball: 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: boolean
f) the first initial of a basketball player's first name: string

8. **What is the value of each of the following expressions?**

a) 5 + 7 – 3 = 9
b) 10 * 2 – 3 = 17
c) 10 * (2 – 3) = 10
d) 8 – 3 * 2 = 2
e) 10 / 5 * 4 = 8
f) 10 / 2 + 3 = 8
g) 6 % 3 + 4 = 4
h) 12 % 5 * 3 = 6
i) 12 % (5 * 3) = 12

10. **a)** a = l*w
b) p = (r-c)/n
c) a = (h*(b1+b2))/n
d) v = 4/3*(Math.pi)*(Math.pow(r, 3)
e) a = (F+S+T)/3
f) p = (5*f)/4*(Math.pow(d,2))
g) a = (P) + (P*r*t)

13. **a)** total += 10;
b) numStones -= 1;
c) days %= 24;
d) price *= 1.2;

15.

a)
```
duble salary;
```
← **syntax:** incorrect data type (a)

b)
```
int numHats
```
← **syntax:** missing semicolon (b)

c)
```
length == 12;
```
← **syntax:** incorrect use of double operator (c)

d)
```
int test1 = 90;
int test2 = 85;
double avg;
avg = test1 + test2 / 2;
```
← **logic**: declaring avg twice (d)

e)
```
double x = 12;
double y = 0;
double z;
z = x / y;
```
← **runtime:** dividing by 0 = undefined answer (e)

f)
```
double payCheck = 120.00;
NumberFormat money =
        NumberFormat.getPercentInstance();
System.out.println(money.format(payCheck);
```
← **logic:** calculated as a percent, when it is money in double type (f)

← **syntax:** missing bracket after (payCheck) (f)