WEEK#5 …..What is TRUTH? …with answers

1. TRUE or FALSE: Both of the following if statements perform the same operation.

```
if (sales > 10000)
 commissionRate = 0.15;
```

Ans. TRUE

```
if (sales > 10000) commissionRate = 0.15;
```

2. TRUE or FALSE: Both of the following if statements perform the same operation.

```
if (calls == 20)
 rate *= 0.5;
```

Ans. FALSE

```
if (calls = 20)
rate *= 0.5;
```

3. Although the following code segments are syntactically correct, each contains an error. Locate the error.

```
a) if (hours > 40);
     cout <<hours <<" hours qualifies for overtime. \n";
b) balance = 1000;
   if (interestRate =.07)
     cout <<"This account is earning the maximum rate. \n";
c)  if (interestRate >.07)
     cout <<"This account earns a $10 bonus. \n";
    balance += 10.0;
```

A) The if statement is terminated with a semicolon.

B) The = operator is used instead of the == operator.

C) Only the first statement after the if statement is conditionally executed. Both of

4. Write an if statement that assigns 0 to x if y is equal to 20.

```
Ans.    if (y == 20)
        x = 0;
```

5. Write an if statement that multiplies payRate by 1.5 if hours is greater than 40.

```
Ans.    if (hours > 40)
        payRate *= 1.5;
```

6. Write an if statement that assigns .20 to commission if sales is greater than or equal to 10000.00

```
Ans.    if (sales >= 10000.00)
        commission = .20;
```

7. Write an if statement that set the variable fees to 50 if the flag variable max is set to true

```
Ans.    if (max)
        fees = 50;
```

8. Write nested if statements that perform the following test: If amount1 is greater than 10 and amount2 is less than 100, display the greater of the two.

```
ANS. if (amount1 > 10)
       if (amount2 < 100)
         if (amount1 >amount2)
           cout << amount1;
         else
           cout << amount2;
```

9. Write an if statement that prints the message "The number is valid" if the variable speed is within the range 0 through 200.

```
Ans.    if (speed >= 0 && speed <= 200)
        cout << "The number is valid.":
```

10. Write an if statement that prints the message "The number is valid" if the variable speed is outside the range 0 through 200.

```
Ans.    if (speed < 0 || speed > 200)
        cout << "The number is not valid.";
```