If Statements Worksheet

Find errors: int x = 15;

**1.** if x<3 { **(1 error)**

Serial.println ("apple");

}

**2.** if (x=5) { **(1 error)**

Serial.println ("apple");

}

**3.** if (x=5) **(1 error)**

Serial.println ("I like");

Serial.println ("apples");

else

Serial.println ("I don’t like apples");

**4.**  **(2 errors)**

if (x>5 && 5!=3) {

Serial.println ("I like");

Serial.println ("apples");

}

else if (x<5 && 5!=3){

Serial.println ("I don’t like apples");

}

else (x==5)

Serial.println ("I don’t know if I like apples")

**5. What will be printed to the serial monitor?**

int sensorValue = 600;

void setup() {

Serial.begin(9600);

}

void loop() {

if (sensorValue > 500) {

Serial.println("High value");

}

}

**6. What will happen?**

int buttonState = HIGH;

void setup() {

pinMode(13, OUTPUT);

}

void loop() {

if (buttonState == HIGH) {

digitalWrite(13, HIGH);

}

}

**7. What will be printed to the serial monitor?**

int temperature = 20;

void setup() {

Serial.begin(9600);

}

void loop() {

if (temperature < 25) {

Serial.println("Temperature is low");

}

}

**8. What will be printed to the serial monitor?**

int switchState = LOW;

void setup() {

Serial.begin(9600);

}

void loop() {

if (switchState == LOW) {

Serial.println("Switch is off");

}

}

**9. What will happen?**

int lightLevel = 800;

void setup() {

pinMode(8, OUTPUT);

pinMode(7, OUTPUT);

pinMode(5, OUTPUT);

}

void loop() {

if (lightLevel > 900) {

digitalWrite(7, HIGH);

} else if (lightLevel > 700) {

digitalWrite(8, HIGH);

} else {

digitalWrite(5, HIGH);

}

}

**State the output:**

int MAX = 25;

int num1 = 12;

**10.** if (num1 < MAX)

Serial.println("apple");

**11.** if (num1 < 10){

Serial.println("apple");

}

else{

Serial.println("orange");

}

**12.** if (num1 <= 12){

Serial.println("apple");

}

else{

Serial.println("orange");

}

**13.** if (num1 < MAX){

if (MAX >= 7){

Serial.println("apple");

}

}

Serial.println("orange");

**14.** if (num1 == MAX){

if (num1 == 12)

Serial.println("apple");

}

Serial.println("orange");

**15.** if (num1 <= 18){

if (num1 < 0)

Serial.println("apple");

else

Serial.println("orange");

}

Serial.println("pear");

**16.** if (MAX == 25)

Serial.println("apple");

if (num1<=12)

Serial.println("orange");

if(num1==12 && 3>1 || num1==2)

Serial.println("pear");

For exercises 17 to 19, write code segments that will perform the specified action.

Assume that all variables have already been declared and given values.

**17.** Print "Hurrah!" if the variable **my\_value** is positive.

**18.** Increment the integer variable **tota**l if **tota**l is zero and decrement **tota**l otherwise. (Hint: 'x++' will increment the value of 'x', 'x--' will decrement the value of 'x').

**19.** Print "num is zero", "num is negative", or "num is positive" as appropriate based on the current value of the variable **num**.