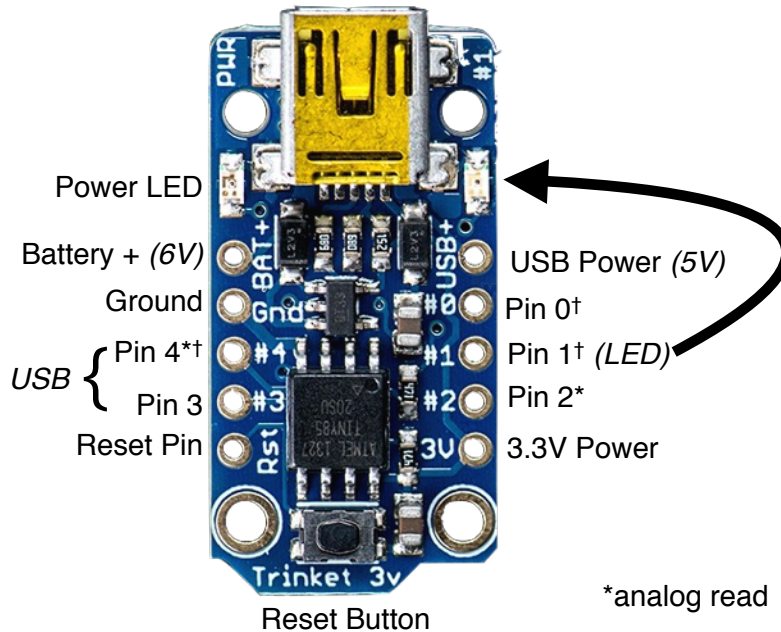


Trinket Reference Sheet Eli Whitney Museum / Week 6

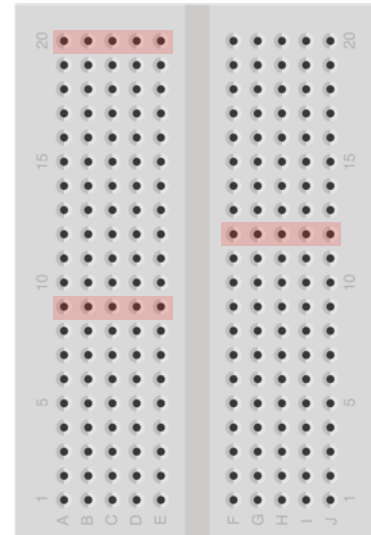
Name: _____



*analog read
 †analog write

Upload programs when **Red LED** is blinking.
 Press reset button or plug in to computer.

Breadboard

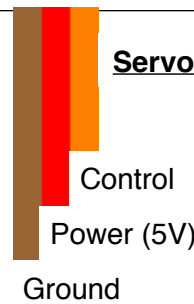
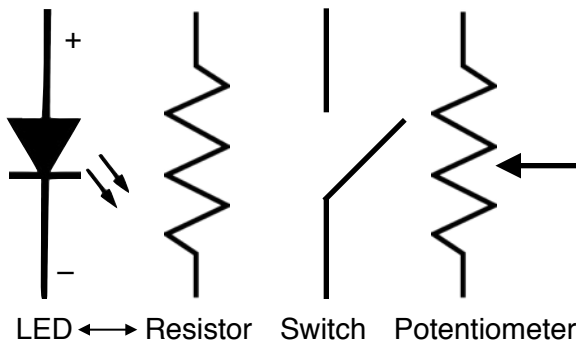


Horizontal holes are connected (per side).

Conditionals:

```
if(a == b) {
  // do this if a=b
} else if (a > b) {
  // do this if a>b
} else {
  // otherwise do this
}

while(a == b) {
  // loops while a = b
}
```



Every program needs:

```
#include <rover.h>
void setup() {
}

void loop() {
}
```

Basic Functions:

```
pinMode(pin#, INPUT/OUTPUT);
digitalWrite(pin#, HIGH/LOW);
digitalRead(pin#); → HIGH/LOW
analogRead(pin2or4); → 0 to 1023
analogWrite(pin0,1,4, 0 to 255);
delay(#ofMilliseconds);
```

Variables:

```
// declaration:
int foo = 0;

// set value
foo = digitalRead(0);
```

Robot Functions:

```
rover(leftPin, rightPin);

start();
stop();

straight(-60 to 60);

turnL(-60 to 60);
turnR(-60 to 60);
rotate(-60 to 60);

// cal values are 0 to 1
cal(left, right)
```

Setting Up Arduino at Home

1. Go here: tiny.cc/rover6
2. Download the Arduino software.
 - Windows needs the drivers installed.
 - No drivers for Mac.
3. Download your programs.
4. In Arduino, choose Tools > Board > **Adafruit Trinket 8 MHz**
5. Then choose Tools > Programmer > **USBtinyISP**
6. Remember to press the reset button before uploading.