

## 6月5日の授業中に作成したサンプルプログラム

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```
//その1
void drawPackMan(){
  pushMatrix();
  float angle=PI/6;
  arc(0, 0, 40, 40, angle, 2*PI-angle);
  rotate(angle);
  line(0, 0, 20, 0);
  rotate(-2*angle);
  line(0, 0, 20, 0);
  popMatrix();
}
```

```
void setup(){
  size(400,400);
}
```

```
void draw(){
  background(255);
  fill(255,10,10);
  drawPackMan();
}
```

```
//その2
void drawPackMan(float x,float y){
  pushMatrix();
  translate(x,y);
  float angle=PI/6;
  arc(0, 0, 40, 40, angle, 2*PI-angle);
  rotate(angle);
  line(0, 0,20, 0);
  rotate(-2*angle);
  line(0, 0, 20,0);
  popMatrix();
}
```

```
void setup(){
  size(400,400);
}
```

```
void draw(){
  background(255);
  fill(255,10,10);
}
```

```

    drawPackMan(mouseX,mouseY);
}

//その3
void drawPackMan(float x,float y,float angle){
    pushMatrix();
    translate(x,y);
    //float angle=PI/6;
    arc(0, 0, 40, 40, angle, 2*PI-angle);
    rotate(angle);
    line(0, 0,20, 0);
    rotate(-2*angle);
    line(0, 0, 20,0);
    popMatrix();
}

void setup(){
    size(400,400);
}

void draw(){
    background(255);
    fill(255,10,10);
    drawPackMan(mouseX,mouseY,map(millis()%360,0,360,0,PI/5));
}

//その4
String today(){
    String msg = str(year()) + "/" + str(month()) + "/" + str(day());
    return msg;
}

void setup(){
    size(400,400);
}

void draw(){
    println(today());
}

//その5
PFont font;

String today(){
    String msg = year() + "/" + month() + "/" + day();
}

```

```

    return msg;
}

String now(){
    String msg = hour()+":"+minute()+":"+second();
    return msg;
}

void setup(){
    size(400,200);
    font = loadFont("SansSerif-48.vlw");
    textFont(font,48);
}

void draw(){
    background(255);
    fill(0);
    String str = now();
    text(str,100,height/3);
    text(today(),100,2*height/3);
}

//その6
float area(float r){
    float a = PI*r*r;
    return a;
}

void setup(){
    size(400,400);
}

void draw(){
    background(255);
    noFill();
    float r = dist(mouseX,mouseY,width/2,height/2);
    ellipse(width/2,height/2,2*r,2*r);
    println(area(r));
}

//その7
boolean doesCollide(int x, int y, int xTip, int yTip) {
    float d = dist(x, y, xTip, yTip);
    if (d <= 20) {
        return true;
    } else if ((abs(x - xTip) <= 20) && (y <= yTip)) {
        return true;
    }
}

```

```
    } else {  
        return false;  
    }  
}
```

```
void setup() {  
    size(400, 400);  
}
```

```
void draw() {  
    background(255);  
    stroke(0);  
    if (doesCollide(mouseX, mouseY, width/2, height/3)) {  
        fill(255, 10, 10);  
    } else {  
        fill(100);  
    }  
    line(width/2, 0, width/2, height/3);  
    ellipse(mouseX, mouseY, 2*20, 2*20);  
}
```

```
//その 8  
float area(float x, float y) {  
    return x*y;  
}
```

```
boolean doesCollide(float x, float y, float xTip, float yTip) {  
    float d = dist(x, y, xTip, yTip);  
    if (d <= 20) {  
        return true;  
    } else if ((abs(x - xTip) <= 20) && (y <= yTip)) {  
        return true;  
    } else {  
        return false;  
    }  
}
```

```
void setup() {  
    size(400, 400);  
}
```

```
void draw() {  
    background(255);  
    stroke(0);  
    float x = width/2;  
    float y = 100*sin(map(millis()%1800, 0, 1800, 0, 2*PI))+200;
```

```
if (doesCollide(mouseX, mouseY, x, y)){  
    fill(255, 10, 10);  
} else {  
    fill(100);  
}  
line(x, 0, x, y);  
ellipse(mouseX, mouseY, 2*20, 2*20);  
}
```