

```
public Rectangle(int x1, int y1, int x2, int y2) {  
    this.x1 = x1;  
    this.y1 = y1;  
    this.x2 = x2;  
    this.y2 = y2;  
}  
  
public int width() {  
    return this.x2 - this.x1;  
}  
  
public int height() {  
    return this.y2 - this.y1;  
}  
  
public double area() {  
    return this.width() * this.height();  
}
```

The diagram illustrates variable references within the provided Java code. Purple circles represent references to the 'this' object, while orange circles represent references to local variables. Lines connect these circles to the specific variable names they refer to in the code.

- Purple Circles (this references):**
 - One circle points to `this.x1` in the constructor.
 - Another circle points to `this.y1` in the constructor.
 - A third circle points to `this.x2` in the constructor.
 - A fourth circle points to `this.y2` in the constructor.
 - Two circles point to `this.x2` in the `width()` method.
 - Two circles point to `this.x1` in the `width()` method.
 - Two circles point to `this.y2` in the `height()` method.
 - Two circles point to `this.y1` in the `height()` method.
- Orange Circles (local variable references):**
 - One circle points to `x1` in the constructor.
 - Another circle points to `y1` in the constructor.
 - A third circle points to `x2` in the constructor.
 - A fourth circle points to `y2` in the constructor.
 - Two circles point to `x2` in the `width()` method.
 - Two circles point to `x1` in the `width()` method.
 - Two circles point to `y2` in the `height()` method.
 - Two circles point to `y1` in the `height()` method.