QUIZ

You want to write some code that draws ellipses at random positions across the canvas each time your mouse is pressed. If you only want to draw one ellipse per mouse press, no matter how long the press, which mouse event should you use?



The keyTyped() function runs once each time a specified key is pressed but ignores some keys. What kinds of keys are NOT detected with the keyTyped() function?

Number keys.

Action keys such as Backspace, Delete, Ctrl, Shift, and Alt.

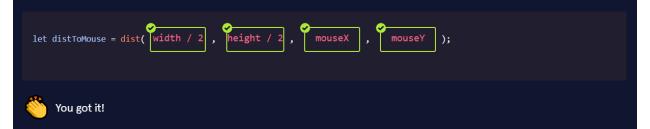


Correct!

Capitalized letter keys.

Special characters such as !, @, %, *.

Complete the code below to calculate the distance between the center of a p5.js canvas and the mouse position. For the code below, set the canvas center as the first point and the mouse position as the second point of the dist() function.



Which of the following statements is true about mousex and mousey?

The mouseX and mouseY variables need to be declared with a corresponding scope before they can be used.

The built-in mouseX and mouseY variables always store the current x and y coordinates of the mouse relative to the origin of the canvas.



Correct!

The mouseX and mouseY variables always store the previous x and y coordinates of the mouse relative to the origin of the canvas.

Both mouseX and mouseY are user-defined variables that can be programmed to determine the mouse position.

What can the built-in key variable be used for?

The key variable can be used to store a set of recent key inputs into an array.

The key variable can be used to check if a specific key has been pressed.



Correct!

The key variable can be used to test the ASCII decimal code of the most recently pressed key.

The key variable can be used to hold key press values for later use.

What will the output of the following code be when it runs?

```
function setup() {
    createCanvas(400, 400);
}

function draw() {
    background(220);

    if(mouseIsPressed) {
       console.log('A red ellipse is drawn.');
    } else {
       console.log('A blue triangle is drawn.');
    }
}
```

'A red ellipse is drawn.' will be logged to the console.

The program will cause an error as the mouseIsPressed variable should not be used as a condition of an if statement.

'A red ellipse is drawn.' logs to the console when the mouse is pressed, and 'A blue triangle is drawn.' logs to the console when the mouse is not pressed.



Correct!

Fill in the code below to correctly draw the shapes using keyboard interaction.

```
function draw() {
    if ( keyIsPressed ) {
        if( keyCode === 13) {
            ellipse(width / 2, height / 2, 40, 40);
        }
        if( key === 'a') {
            rectMode(CENTER)
            rect(width / 2, height / 2, 40, 40);
        }
    }
}
```



You got it!

Complete the code below so that the rectangle being drawn in the draw() function follows the mouse's x and y positions and the mouse's x position sets the width of the rectangle.

```
function setup() {
    createCanvas(500, 500);
    background(220);
}

function draw() {
    fill(255,130,120);
    rectMode(CENTER);
    rect( mouseX , mouseY , 75);
}
You got it!
```

Which of the code blocks below represents the proper way the keyPressed() function, combined with the built-in key variable, can be used to test if a specific key has been pressed?

```
function keyPressed() {
    fill(0, 255, 0);
    rect(random(width), random(height), 100, 75);
}
```

```
function keyPressed() {
   if (key === 'a') {
     fill(0, 255, 0);
     rect(random(width), random(height), 100, 75);
   }
}
```



Correct!

