Which of the following code examples properly changes the location the ellipse is drawn from, so the x and y coordinates passed into the ellipse() function signifies the top-left corner position of the ellipse's bounding box?

```
ellipse(50, 50, 100, 100);

ellipse(50, 50, 100, 100);

ellipse(50, 50, 100, 100);

ellipse(50, 50, 100, 100);

ellipseMode(CORNER);

ellipseMode(CORNER);
```

Correct! The ellipseMode(CORNER) called before the ellipse() function changes the origin point from

the center to the top-left corner of the ellipse's bounding box.

Which of the following statements is NOT true about the push() and pop() functions?

The push() function saves the current drawing styles and transformations.

The push() function can be used without the pop() function, and vice versa.

You got it! This is not true because the push() and pop() functions should always be used together.

The pop() function restores styles and transformations back to the settings that were in effect prior to the most recent call to push().

The push() and pop() functions are used to isolate style changes (i.e. stroke, fill, etc) and transformations.

Fill in the arguments for the makeCircle() function calls so that it creates two circles at different positions but the same size of 50 pixels.

```
function draw(){
  makeCircle(10, 20, 50 ); // First circle

  makeCircle(10, 30 , 50 ); // Second circle
}

function makeCircle(xPos, yPos, size) {
  ellipse(xPos, yPos, size, size);
  xPos = xPos + 1;
}
You got it!
```

Which of the following code does NOT rotate the canvas by π / 4 radians (45 degrees)?

Show more

```
rotate(radians(45));

rotate(45);

Correct! This would not rotate the canvas by π / 4 radians or 45 degrees. In order to rotate by 45 degrees, you would need to specify angleMode(DEGREES) above the rotate() function, so p5.js knows to conv...
```

Which of the following code blocks will place the rectangle in the middle of the canvas and cause it to rotate around its center?

```
rectMode(CENTER);
rect(0, 0, 400, 400);
translate(width/2, height/2);
rotate(radians(frameCount));
```

```
rectMode(CENTER);
rotate(radians(frameCount));
translate(width/2, height/2);
rect(0, 0, 400, 400);
```

```
rectMode(CENTER);
translate(width/2, height/2);
rotate(radians(frameCount));
rect(0, 0, 400, 400);
```



You got it! When you apply multiple transformations, the order makes a difference. The combination of the rectMode(CENTER) and translate() functions places the retangle in the middle of the canvas first. ... Show more

Which of the following statements is NOT true about the noise() function?

The noise() function returns a random float value between 0 and the value passed into the function.



You got it! This statement is incorrect. The noise() function returns a random float value between 0 and 1.

The noise() function returns a random float value, between 0 and 1.

The noise() function is useful for creating more natural random movements.

The noise() function returns a random value based on the Perlin noise.

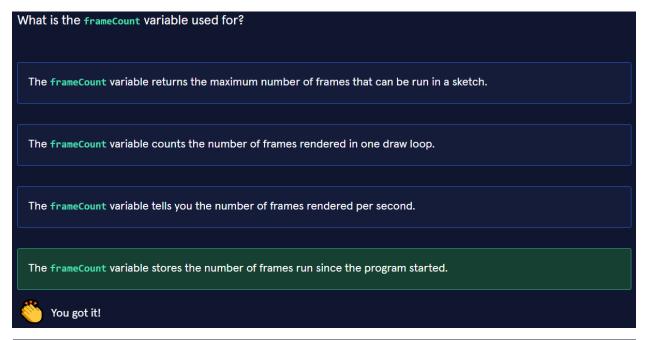


Which of the following code snippets properly changes the location the rectangle is drawn from so that the x and y coordinate passed into the rect() function signifies the center of the rectangle?

```
rect(width/2, height/2, 50, 50);

rect(width/2, height/2, 50, 50);
```

Correct! The rectMode(CENTER) called before the rect() function changes the origin point from the top-left corner to the center of the rectangle.



Fill in the code below to generate a random value between 0 and 255 for the grayValue variable and a random number between 0 and width / 2 for the size variable.

```
let grayValue = random( 0 , 256 );
let size = random( width / 2 );

You got it!
```

Fill in the code below to scale the size of the coordinate system so that the rectangle appears 50% smaller and the ellipse looks 200% wider and 400% taller.

```
scale( 0.5 );
rect(0, 0, 120, 120);
scale( 2 , 4 );
ellipse(100, 100, 120, 120);

You got it!
```

After defining your own function, where in the code for a p5.js sketch can you call the function?

User-defined functions can only be called inside the setup() function.

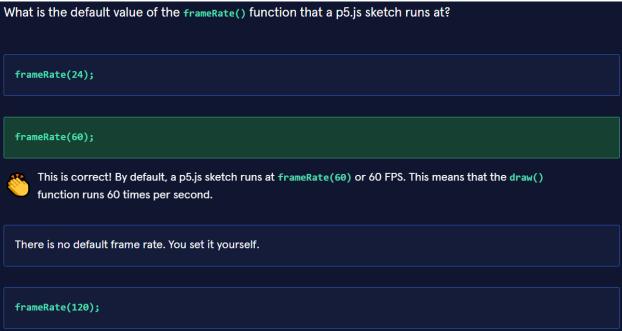
User-defined functions can be called inside the draw() and setup() function.

Correct!

User-defined functions can only be called inside that same function.

User-defined functions can only be called in other user-defined functions.

What is the default value of the frameRate() function that a p5.js sketch runs at?



Fill in the code below to horizontally shear the rectangle by 25 degrees and vertically shear it by 90 degrees. Specify the angle mode to use degrees.

```
angleMode( DEGREES );
shearX( 25 );
shearY( 90 );
rect(50, 50, 100, 100);

You got it!
```

Which of the following statements is true about the draw() function?

The draw() function is automatically called after the setup() function. The draw() function is executed repeatedly in a loop.



Correct!

The draw() function is automatically called before the setup() function. Both functions repeatedly run in a loop.

The draw() function is automatically called before the setup() function. The draw() function runs repeatedly in a loop.

The draw() function is automatically called after the setup() function. The setup() function runs repeatedly in a loop.

What does the translate() function in the code below do?

```
ellipse(0, 0, 20, 20);
translate(40, 40);
rect(0, 0, 50, 50);
```

It adds 40 pixels to the width and height of the shapes above and below the translate() function.

It moves the origin of the p5.js canvas from the coordinates (0, 0) to (40, 40).



Correct! The translate() function moves the whole p5.js canvas to the coordinates specified as arguments of the function.