

## POWER CONTROL HUB

### Story

With your crew's help, you pick up the captain and head toward the escape pods. To send the ship's remaining power to the pods, you have to make your way down the hall and find the Power Control Hub. You need to use the hub's calibration dial to get the 3-letter code you will input to confirm the transfer of power.

### Directions

Head to the hub by going to <https://www.geogebra.org/m/rwwffvkr> and use the calibration dial to determine the 3-letter code.

**The answer to question 1 will give you the first letter of the code. The answer to question 2 will give you the second letter, and the answer to question 3 will give you the final letter.**

Each answer will be in the form of  $a + bi$ . The inner circle represents the real portion of your answer, and the outer circle represents the imaginary portion. Line up the real and imaginary parts with the arrow on the right, then look at the letter that displays under the word *Code*.

1) What is the complex conjugate of  $-3 - 7i$ ?

2) Simplify:  $\frac{9 - 8i}{-1 + 2i}$

3) Simplify:  $\sqrt{-4} + \sqrt{16} - \sqrt{-9}$

Transfer Power Code		
First Letter	Second Letter	Third Letter

Once you have the 3-letter code written in the table above, exchange this handout with your teacher to get the next clue.