

# 5.G Battle Ship Using Grid Paper

## Task

## Materials

The students will need grid paper and colored pencils; some color for the ships and (for example) red for explosions on their ships and their enemy's ships. This is how they will keep track of what ordered pairs have been called.

## Setup

Students begin by folding the grid paper in half. They need to draw coordinate axes on both the top half and the bottom half and label the  $x$  and  $y$  axes with the numbers 1–10 on each axis. The students will need to draw in 5 ships on ordered pairs and label the ordered pairs. They should draw:

- Two ships that are sitting on 2 ordered pairs,
- One ship that is sitting on 3 ordered pairs,
- One ship that is sitting on 4 ordered pairs, and
- One ship sitting on 5 ordered pairs.

Remind them the bottom half has their boats or (Navy) and the top half has their opponent's boats.

## Actions

Students play in pairs sitting opposite each other and take turns calling out ordered pairs. Players should keep a list of the ordered pairs they call out written in  $(x, y)$  form on a piece of paper that both players can see so there is no disagreement later on about what has been called (it is common for students to transpose the coordinates). Then they are to mark the ordered pair they call out on the top coordinate plane. They should mark in black if they missed and red if they hit their opponent's boat. On the

bottom half of the grid paper they are to color black for the ordered pairs their opponent calls out and color red for the ordered pairs that hit their ship.



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