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## Enrich

## Relic Hunter

The game of Relic Hunter is based on methods used to record the precise locations of artifacts discovered at archaeological digs. Archaeologists use string to position a grid over a dig site. An artifact's location is named by the row and column in the grid.
Relic Hunter is played with two players who each secretly place six artifacts on one of the coordinate grids below. Artifacts may not overlap. Each player should not be able to see where the other player's artifacts are hidden. A player must look for the artifacts by guessing an ordered pair. The other player then finds that location on the secret grid and tells the first player whether part of the artifact is located in that section and what the artifact is. Each player's empty coordinate grid should be used to mark the locations of guesses and of found artifacts. The winner is the player who first uncovers all of the opponent's artifacts.


| 5 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4 |  |  |  |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |  |  |  |
| 1 |  |  |  |  |  |  |  |  |  |  |  |
| 0 |  |  |  |  |  |  |  |  |  |  |  |
| -1 |  |  |  |  |  |  |  |  |  |  |  |
| -2 |  |  |  |  |  |  |  |  |  |  |  |
| -3 |  |  |  |  |  |  |  |  |  |  |  |
| -4 |  |  |  |  |  |  |  |  |  |  |  |
| -5 |  |  |  |  |  |  |  |  |  |  |  |
|  | -5 | -4 | -3 | -2 | -1 | 0 | 1 | 2 | 3 | 4 | 5 |



For Exercises 1-6, list each ordered pair that could contain the rest of the artifact. Then play the game with a partner. Use one coordinate grid to keep track of the points where you hide your artifacts and another coordinate grid to keep track of the points you have guessed.

1. You uncover parts of the spear at points $(-2,3)$ and $(-2,4)$.
2. You uncover a part of the charm at point $(-4,-2)$.
3. You uncover a part of the bow at point $(5,-5)$.
4. You uncover part of the animal bone at points $(2,1)$ and $(2,2)$.
5. You uncover a part of the clay pot at point $(0,-1)$.
6. Part of the charm is located at point $(-5,-2)$ and there is nothing at point $(-2,-4)$. You uncover a part of the mosaic panel at point $(-4,-4)$. What other points could contain the mosaic panel?
