
Space Domination
Cameron Jordan

Made using LaTeX 2_ε

Components:

- Rule booklet
- 3× Starship
- 9× Torpedo

The rules

Play on the table top. 1 unit = 1 cm, adjust if needed. You can use rulers, meter sticks, tape measures or any other straight edge to represent vectors.

Each player's starship has 3 damage points. When a starship gets hit by a torpedo or another starship, it loses a damage point. If a starship reaches 0 damage points, flip it over and draw an 'X' on the back. Should a starship's movement cause it to fly off the edge of the table the starship's damage points is reduced to 0.

Each player's starship starts with 3 torpedoes

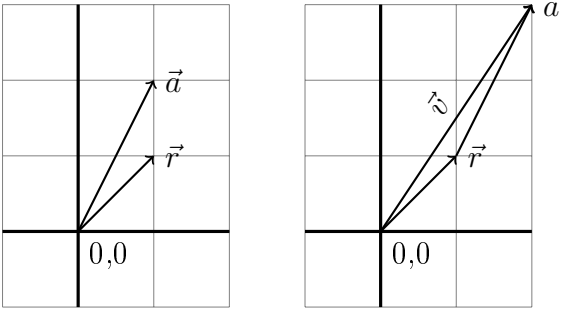
Roll a six sided die to determine turn order, highest roll goes first. On your turn you can either move your starship or lauch a torpedo.

When your starship moves it accelerates in the direction it is pointing. Where your ship moves to is defined by a vector, $\vec{v}$, where:

$$\vec{v} = \vec{a} + \vec{r} \tag{1}$$

calculated using the **tail to tip** method.

The **tail to tip** method



Given two vectors $\vec{a}, \vec{r}$ adding them results in a new vector, $\vec{v}$. Note that two vectors that have the same magnitude and direction are equivalent no mat-

ter their position in the space.

When your ship moves it produces an acceleration vector, $\vec{a}$, with magnitude in units equal to the value rolled on a six-sided die that is in the direction of your ship's acceleration. When the game begins $\vec{r} = \vec{0}$, so on your first move $\vec{v} = \vec{a}$. On your turn before you move $\vec{r}$ is set to the $\vec{v}$ of the previous turn. On your next move you can accelerate again producing a new vector, $\vec{v}$ via eq.1.

While moving you may rotate your ship up to 180° (π radians) clockwise or counterclockwise.

When a torpedo is lauched the starship drifts along its $\vec{r}$. A topedo moves in the same fashion as a starship, but its initial direction is determined by the direction the launching starship is pointed, and the magnitude of the torpedo's $\vec{a}$ is

always 6 units. A torpedo launched is not regained and only accelerates on the same turn as the starship it was launched from. At the end of its movement a torpedo always turns to face its target.

Win condition

Be the last starship standing.