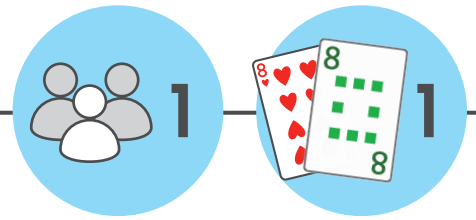# Race to 100

Years 5-6

Purpose

To review basic number facts (+, −, ×, ÷).

Materials

- A pack of School Friendly cards or regular playing cards where Ace = 1, Jack = 11, Queen = 12 and King = 13,
- A pencil.

Organisation

A game for one to four players.

Aim

To score **exactly 100**. (Single player) to do it in 8 turns or under. (2 Player) to do it first.

Rules

- Deal three cards. (Example: 6, 13, and 5)
- Play two cards in any operation. Example, 6 x 13, which equals 78.
- Draw another card from the deck.
- If there are any other players, they take their turn(s) here.
- Try and make 100! You win if you can do it in 8 turns (or do it first).

Sample Game

Turn	Cards Played	Unused Card	New Card
1	6 x 13 (King) = 78	5	4
2	78 + 4 = 82	5	2
3	82 ÷ 2 = 41	5	Ace (1)
4	41 + 1 = 42	5	7
5	42 ÷ 7 = 6	5	3
6	6 x 5 = 30	3	10
7	30 x 3 = 90	10	Jack (11)
8	90 + 10 =100	Jack (11)	

Turn	Cards Played	Unused Card	New Card
1			
2			
3			
4			
5			
6			
7			
8			

Challenge: If you knew what cards were coming up (i.e. 4, 2, 1, 7 and 3), could the sample game have been finished in 5 or less turns? How?

Battleship

Years 5-6, 7+
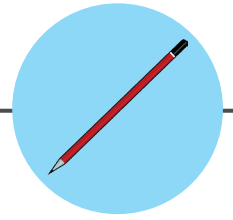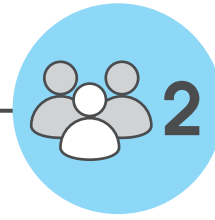
Purpose

To practise coordinates.

Materials

- A Game Sheet (cut in half) and
- a pen(cil).

Organisation
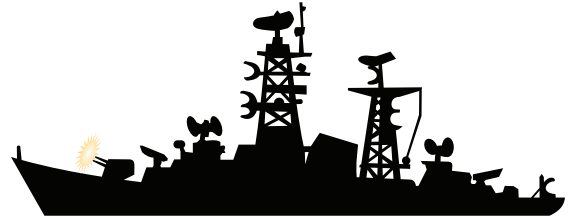
A game for two players.

Aim

The aim is to be the first player to sink your opponent's ships.

Fleet

- 1 battleship, 5 dots in a row,
- 1 cruiser 3 dots in a row,
- 2 destroyers 2 dots in a row each.

Rules

- Place your fleet. Do not let your opponent see it.
- Players take turns to name any position they wish to hit. Use co-ordinates to call your shots.
- If you hit your opponent's ship he/she must say "HIT", otherwise he/she says "MISS"
- Use your other grid to keep track of your shots.
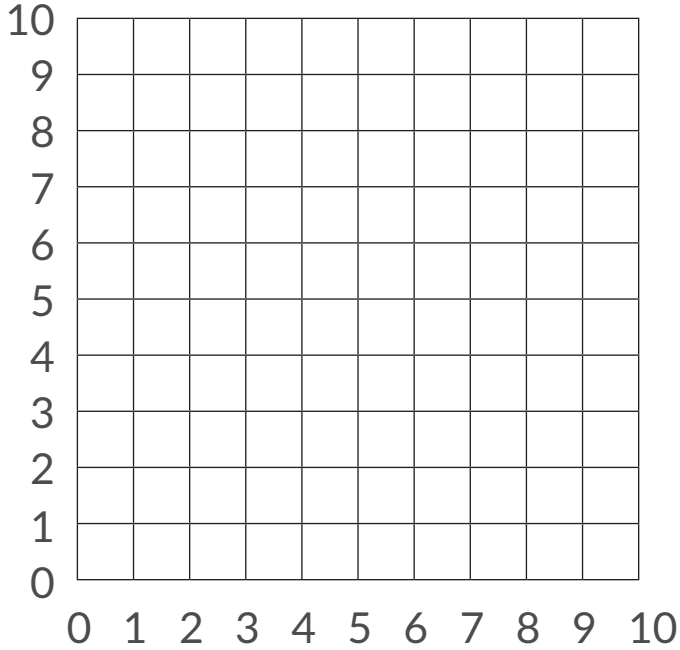- A ship sinks only when all dots are hit.
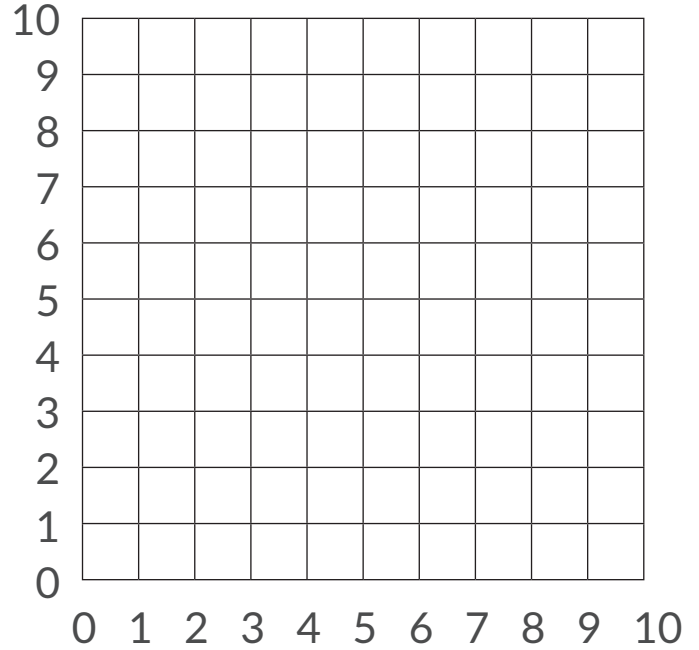
Battleship (Game Sheet)
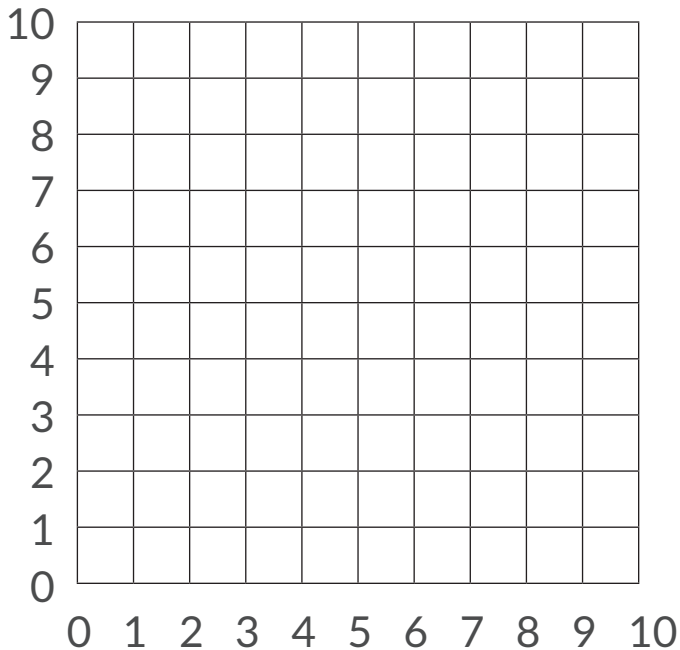
Years 5-6
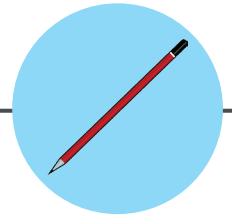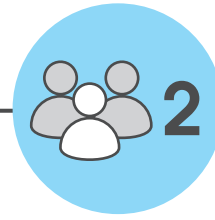
Player 1

My Fleet Locations

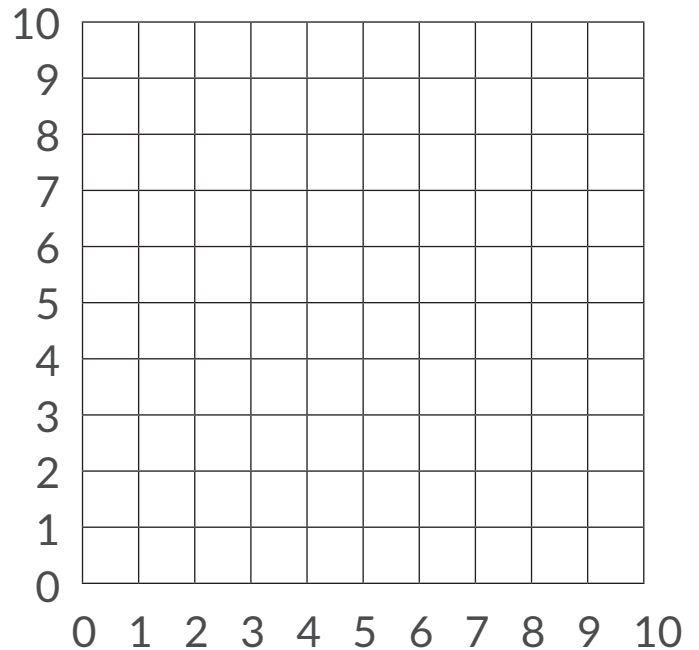**Shots at Opponent's Fleet**
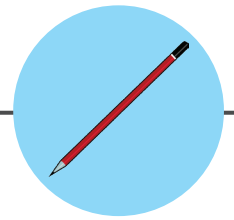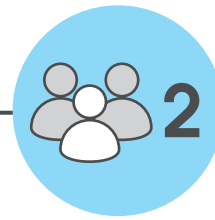
Player 2

My Fleet Locations

Shots at Opponent's Fleet

Ship Shape

Years 5-6, 7+

Purpose

To practise coordinates.

Materials

- A Game Sheet (cut in half) and
- a pen(cil).

Organisation

A game for two players.

Aim

The aim is to be the first player to sink your opponent's ships.

Fleet

- 1. square
- 2. any quadrilateral other than a square
- 3. triangle

My Fleet Locations

Rules

- This game is played along the same lines as Battleships, except that instead of placing battleships (lines) on your grid, you draw shapes.
- Mark the vertices (corners) of these shapes on your grid.
- You and your opponent take turns calling the co-ordinates of a point.
- If your opponent calls the co-ordinates of a point you have marked, you must cross this out and tell him/her what they hit.
- The first player to find all of their opponent's marked points is winner.

Example

- Player a calls (3, 1) and this hits the corner of a square. Player B must say "hit square". All four vertices of the square need to be hit to eliminate this shape from the game. The winner is the first player to locate all of the shapes.
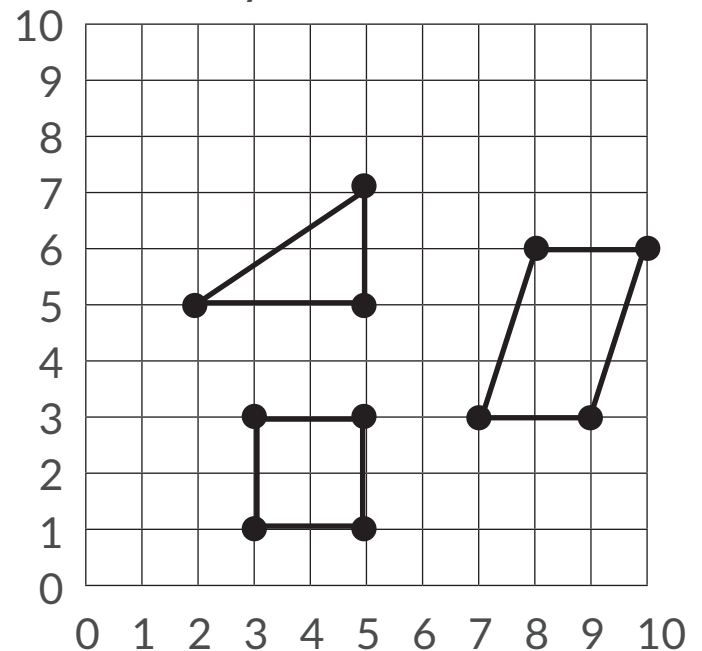
Ship Shape (Game Sheet)

Years X

2

Player 1 _____

My Fleet Locations

```
10 |__|__|__|__|__|__|__|__|__|__|
 9 |__|__|__|__|__|__|__|__|__|__|
 8 |__|__|__|__|__|__|__|__|__|__|
 7 |__|__|__|__|__|__|__|__|__|__|
 6 |__|__|__|__|__|__|__|__|__|__|
 5 |__|__|__|__|__|__|__|__|__|__|
 4 |__|__|__|__|__|__|__|__|__|__|
 3 |__|__|__|__|__|__|__|__|__|__|
 2 |__|__|__|__|__|__|__|__|__|__|
 1 |__|__|__|__|__|__|__|__|__|__|
 0
   0  1  2  3  4  5  6  7  8  9 10
```
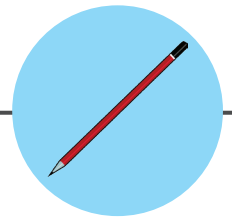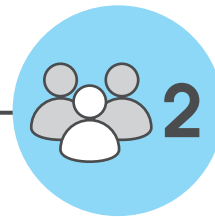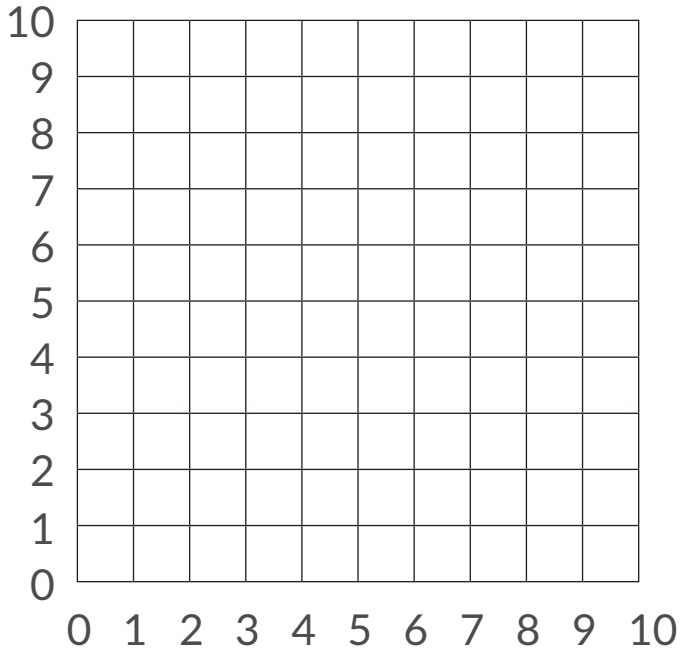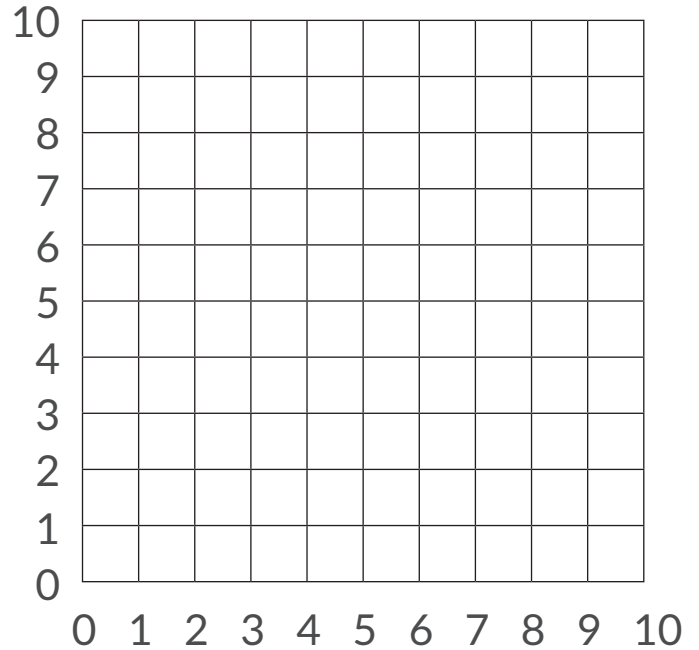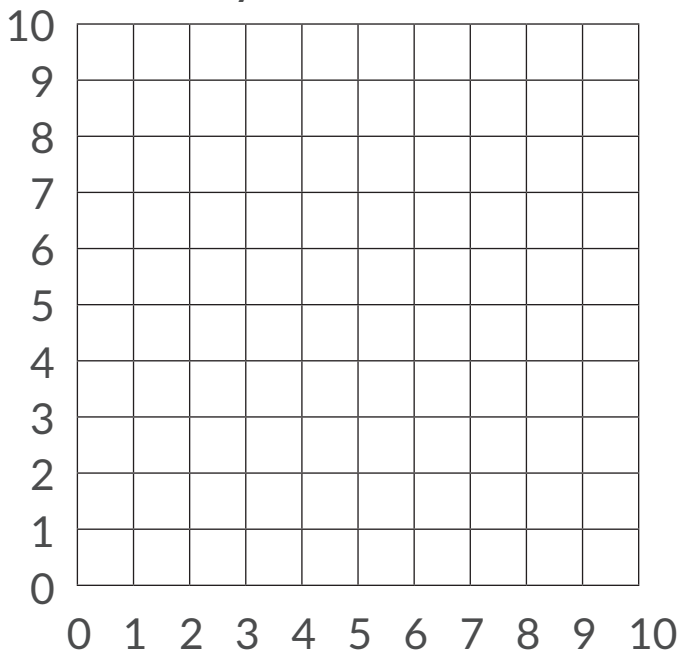
Shots at Opponent's Fleet

```
10 |__|__|__|__|__|__|__|__|__|__|
 9 |__|__|__|__|__|__|__|__|__|__|
 8 |__|__|__|__|__|__|__|__|__|__|
 7 |__|__|__|__|__|__|__|__|__|__|
 6 |__|__|__|__|__|__|__|__|__|__|
 5 |__|__|__|__|__|__|__|__|__|__|
 4 |__|__|__|__|__|__|__|__|__|__|
 3 |__|__|__|__|__|__|__|__|__|__|
 2 |__|__|__|__|__|__|__|__|__|__|
 1 |__|__|__|__|__|__|__|__|__|__|
 0
   0  1  2  3  4  5  6  7  8  9 10
```

Player 2 _____

My Fleet Locations

```
10 |__|__|__|__|__|__|__|__|__|__|
 9 |__|__|__|__|__|__|__|__|__|__|
 8 |__|__|__|__|__|__|__|__|__|__|
 7 |__|__|__|__|__|__|__|__|__|__|
 6 |__|__|__|__|__|__|__|__|__|__|
 5 |__|__|__|__|__|__|__|__|__|__|
 4 |__|__|__|__|__|__|__|__|__|__|
 3 |__|__|__|__|__|__|__|__|__|__|
 2 |__|__|__|__|__|__|__|__|__|__|
 1 |__|__|__|__|__|__|__|__|__|__|
 0
   0  1  2  3  4  5  6  7  8  9 10
```

Shots at Opponent's Fleet

```
10 |__|__|__|__|__|__|__|__|__|__|
 9 |__|__|__|__|__|__|__|__|__|__|
 8 |__|__|__|__|__|__|__|__|__|__|
 7 |__|__|__|__|__|__|__|__|__|__|
 6 |__|__|__|__|__|__|__|__|__|__|
 5 |__|__|__|__|__|__|__|__|__|__|
 4 |__|__|__|__|__|__|__|__|__|__|
 3 |__|__|__|__|__|__|__|__|__|__|
 2 |__|__|__|__|__|__|__|__|__|__|
 1 |__|__|__|__|__|__|__|__|__|__|
 0
   0  1  2  3  4  5  6  7  8  9 10
```
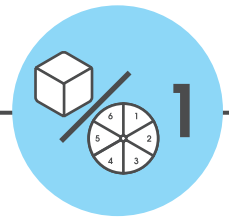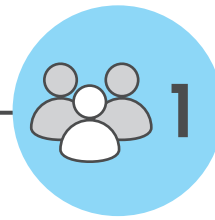
Reach 100

Year 6

Purpose

To calculate the mean (average) times it takes to reach 100.

Materials

- 1 × **six-sided dice** or the **1-6 spinner**,
- Pencil and paper.

Organisation

An activity for one person.

Aim

To detirmine how many times a single six-sided die must be rolled to reach 100.

Procedure

- Roll a 1 to 6 dice until you reach 100.
- Record how many times it takes to reach 100 in the table below.
- Complete at least three rounds.

Results

	Round									
	1	2	3	4	5	6	7	8	9	10
Number of rolls to reach 100										

Questions

What is the least/most number of rolls it took? _____

What is the mean (average) number of rolls needed to reach 100? _____