

Circle/Line intersection

<https://stackoverflow.com/questions/1073336/circle-line-segment-collision-detection-algorithm>

Line/Line intersection

<http://paulbourke.net/geometry/pointlineplane/>

Line/Rectangle intersection

<https://www.jeffreythompson.org/collision-detection/line-rect.php>

Celeste physics philosophy

<https://maddythorson.medium.com/celeste-and-towerfall-physics-d24bd2ae0fc5>

Celeste character controller design philosophy

<https://maddythorson.medium.com/celeste-forgiveness-31e4a40399f1>

AABB introduction

<https://jonathanwhiting.com/tutorial/collision/>

Magical circle/ellipse collision detection

<https://editor.p5js.org/rjgilmour/sketches/uh0III-g9>

custom physics shape / pixel inside polygon detection

<https://www.youtube.com/watch?v=RSXM9bgqxJM>

rope physics

<https://web.archive.org/web/20080618020250/http://www.teknikus.dk/tj/qdc2001.htm>

todo:

fix corner correction

composite body component - for manually arranging multiple bodies

- shape
  - abstract position
  - abstract overlapping
  - abstract evaluate raycast
    - particle
    - shapeSize
      - box
      - circle
- pixel body
  - pixelbody<TShape>
    - pixelparticlebody
    - pixelbodysize<TShape>
      - pixelbody circle
      - pixelbody box

## Components

- pixelbody component
  - sprite base
    - sprite
    - tilemap
  - single
    - box
    - circle
    - particle
- astar grid
- astar agent