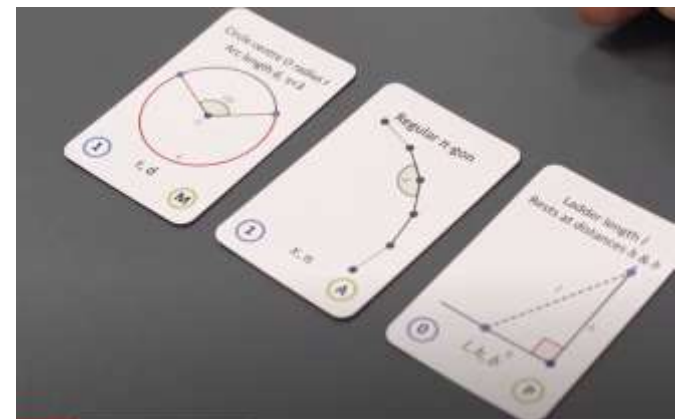


ROUND 2: GRIDLINES GEOMETRY

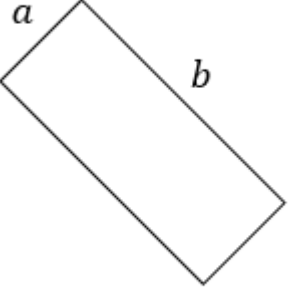
Gridlines Geometry is a card game designed and made especially for the challenge (by me!)

- Cards with geometric problems with variables must be solved using numbers cards.
- There are four problem areas: (i) Angle relationships (ii) Area and Perimeter (iii) Pythagoras (iv) Volume and similar figures.
- Players see three randomly chosen problem cards and use 10 randomly chosen number cards find solutions.
- The game pack contains detailed rules, which are used for normal play and in the challenge.

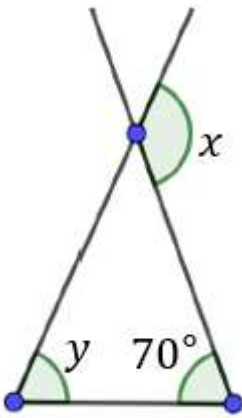


PLAYING GRIDLINES GEOMETRY

Area = 100

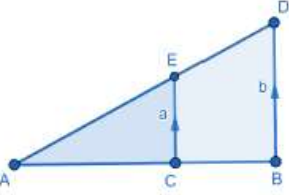


0 a, b M



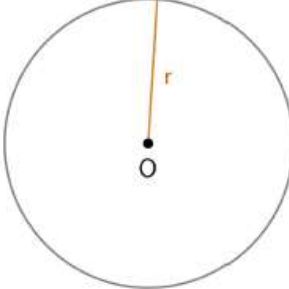
1 x, y A

$\overline{AE}=24, \overline{AD}=32$



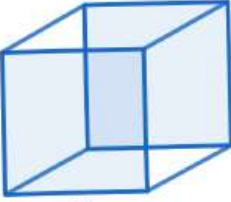
1 a, b V

Circle centre O
Circumference C, $\pi=3$

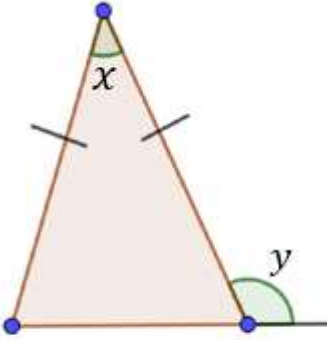


1 C, r M

Cube, side a
 S =Total surface area



1 S, a V



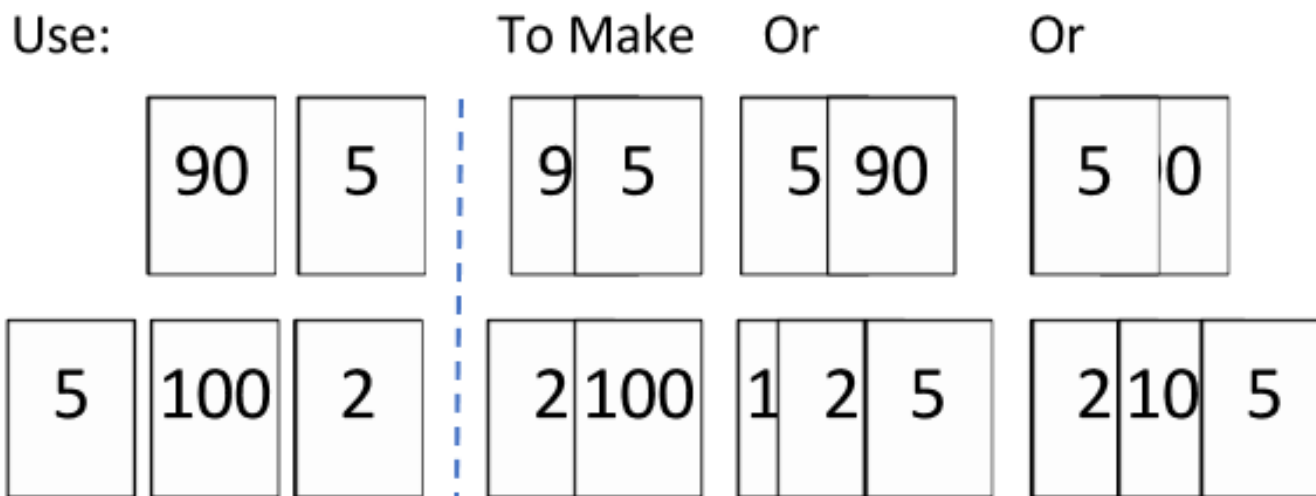
2 x, y A

PLAYING GRIDLINES GEOMETRY

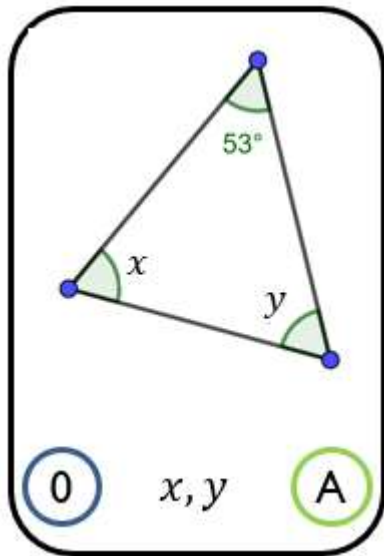
The Number Cards

Number Cards can be organised into groups or played individually. Put cards on top of each other to make new numbers. When placed, ONLY the required number can be visible. Examples:

Use:



PLAYING GRIDLINES GEOMETRY

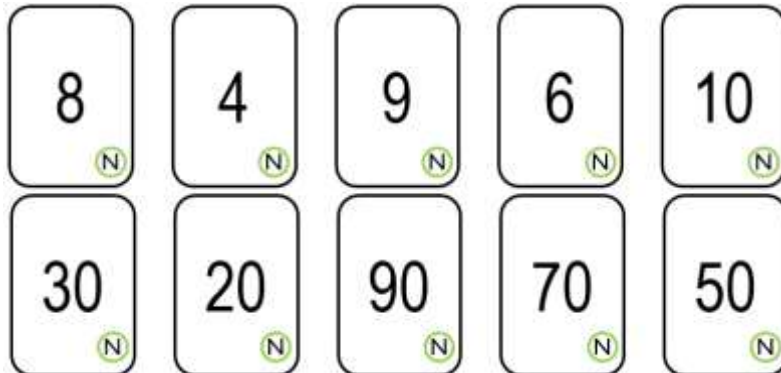


$$x + y = 180 - 53 = 127$$

So, we need to make two numbers with a sum of 127.

Use the 8 and 9 cards to end with 7. So we need 110 more.

Use 20 and 90 cards to make the 110.



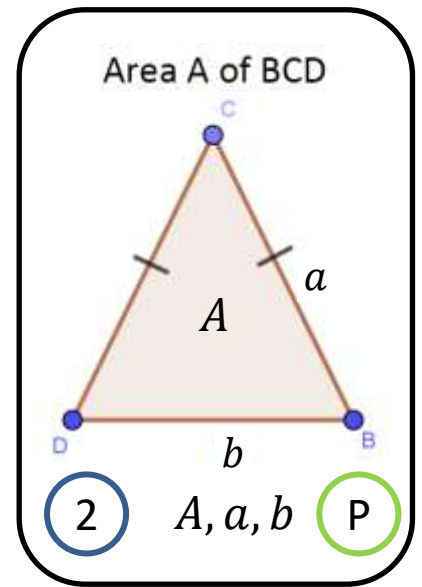
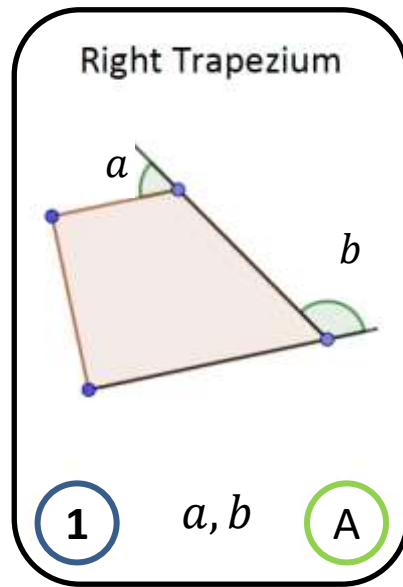
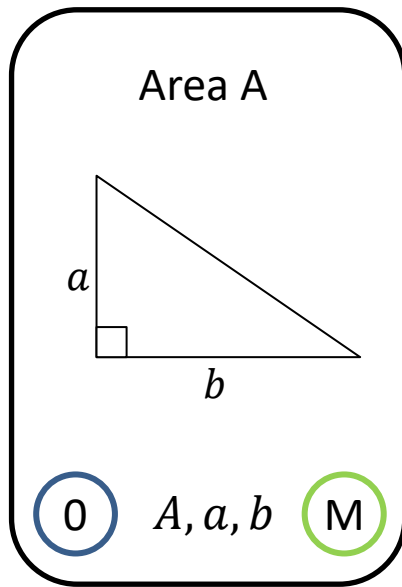
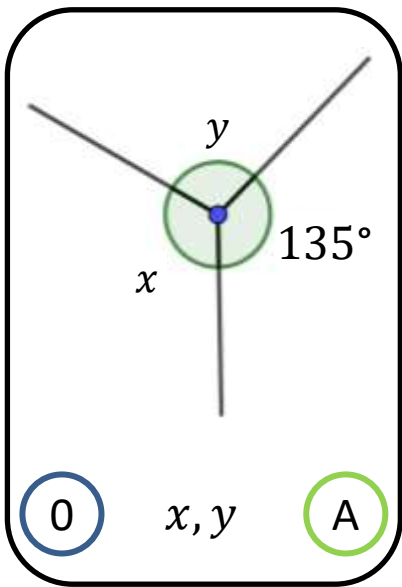
GRIDLINES : HEATS AND FINAL

- Play an uninterrupted 15 minute round according to the game pack rules.
- As soon as any one problem card is solved, the card is put to one side for scoring and replaced to make three in play problems.
- Any number cards used in the solution are placed at the bottom of the number card pack and replaced.
- Players have three “I give up” cards allowing the replacement of any number of problem and/or number cards.



Substitutions: as often as you like with only 3 players at the table at a time. Solutions are shown and explained to a table judge, not written down.

Watch the video
after this session.



40
N

4
N

5
N

1
N

2
N

3
N

60
N

7
N

100
N

1
N

GRIDLINES: IN SCHOOL ACTIVITY

1. Show three problem cards at the start of a lesson. (While you take the register?)
2. Students find any solution to one of the problems. Explain why it is a solution.
3. Other students present different solutions.
4. Discuss how there can be multiple solutions.