

Master Thesis Seminar

# Problem Solving Perspectives

Short Master thesis proposition

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# Participation task

$$a + b = 7$$

$$a + c = 11$$

$$b + c = 10$$

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$$a + b + c = ?$$

You have 60 seconds to tackle the problem.

Use them wisely!

# Solutions

## Perspective 1

$$a = 7 - b$$

$$a = 7 - (10 - c)$$

$$a = 7 - (10 - (11 - a))$$

$$a = 4$$

## Perspective 2

$$\begin{aligned} 7 + 11 + 10 &= \\ (a + b) + (a + c) + (b + c) &= \\ 2a + 2b + 2c &= \\ 28 & \end{aligned}$$

$$a + b + c = 28 / 2 = 14$$

Usually taught in schools.

- Time consuming
- + Get all values

- + Quickest solution

# Background research

Project in previous semester  
(Mentor: Paolo Petta)

- Internal representation (H. A. Simon)
- Perspectives
  - Solution features
- Archetypes model
  - Building block entities for problem solving
  - Transferable
  - “Ideas”

# Master thesis

Continuing from the project work on the archetypes model.

## Research topic:

Better understanding of perspectives.

How are perspectives generated and what are their properties?

## Mentor



Source: <http://blog.soat.fr/2016/02/chiffre-moi-un-avion/unknown/>

## Goal:

By understanding the properties of perspectives, we can induce their recognition and thus tremendously improve problem-solving.