Working with the Digital Assessment Environment

FaSMEd Meeting 2

- Evaluation Percents and Fractions
- Ahead with the DAE

  - Metric system

  - Graphs

- Next steps

Discussion Percents and Fractions

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- Responses of students after completing the tests?
- When you checked the results, what did you notice first ?
- What went well? What was difficult?

Discussion Percents and Fractions

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- What did you learn from the results?
- What have you done with it , or are you going to do with it?

- Test B?
- Questions and ideas for use?

- What does this consist of?
  - Not: measuring as an activity
  - But how the various units of measurement relate: the metric system.
- What are your teaching experiences with the metric system ?

	Is equal to:
1 km	1000 m
1 m	10 dm
1 dm	10 cm
1 m	100 cm
1 cm	10 mm

Relations between some standard measurement units

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- km → m → dm → cm → mm
- l → dl , cl, ml
- kg → g → mg

Dutch reference level 1F: primarily from larger units to smaller units (in meaningful situations)

Dutch reference level 1S: also from smaller units to larger units, and working with decimal numbers (also without a situation)

- 1 dm^3 = 1 litre = 1000 ml
  (for reference level 1F)

- 1 m^3 = 1000 litres
  (for reference level 1S)

Core competencies metric system

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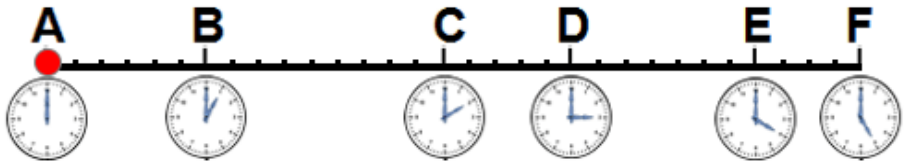
Core competency	Test A	Toets B
Converting measures of weight: g, kg	Problem 1 Click what is more: 5 kg or 7000 grams. How many grams is the difference? ... grams	Problem 1 A shopping bag weighs 3 kg. 40 grams are added. How many grams does the bag weigh now? ... grams
Converting measures of length: cm, dm, m, km	Problem 2 The height of a crate is 60 cm. A pile of five of these crates is ... meters high.	Problem 2 A window is 2 m and 4 dm high. How many centimeters is the height of the window? ... cm
	Problem 3 A sports field is 50 meters wide and 150 meters long. How many kilometers ran the students after 10 laps? ... km	Problem 3 A sports field is 40 meters wide and 60 meters long. After how many laps did the students run exactly 4 km? After ... laps
Converting measures of area: m^2, cm^2	Problem 4 Click what is bigger: a terrace of 10 m^2 or a terrace of 800 dm^2. How many dm^2 is the difference? ... dm^2	Problem 4 How many m^2 of tiles are needed to make a terrace of 50 dm wide and 60 dm long? ... m^2
Converting measures of volume: dm^3, cm^3, liter, dl	Problem 5 Click which tank can hold the most: a tank of 30 liters or a tank of 28 dm^3. How many deciliters is the difference? ... deciliters	Problem 5 Click which tank can hold the most: a tank of 4000 milliliters or a tank of 10 dm^3. How many deciliters is the difference? ... dl
Converting liter, dl, cl, and ml	Problem 6 One glass can 200 ml of lemonade. There are 3 liters of lemonade. How many glasses can you fill? ... glasses	Problem 6 A bottle can hold 150 milliliters of perfume. A container contains 6 liters of perfume. How many bottles can be filled with this? ... bottles

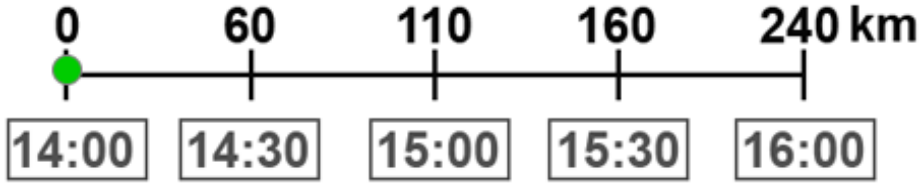
- Common topic in FaSMEd project: time-distance graphs.
- Not a regular component of the mathematics curriculum in primary education (in the Netherlands).
- Test show what students already know and are capable of without instruction.

- Conclusions possible about speed
- Speed is a rate, a special ratio between two related measurements (so many km in so many hrs) expressed as one number.
- For example, 100 km/h

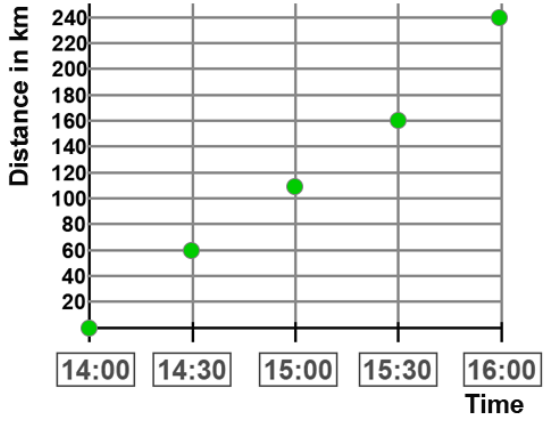
- From visualisation:



- To scheme:



- To graph:



Core competencies graphs

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Core competency	Test A	Test B
Pictorially represented data: Drawing conclusions about speed for various distances that have been covered in the same amount of time	Problem 1 (see manual)	Problem 1 (see manual)
Schematically presented time-distance schedule: Drawing conclusions about speed for fixed equal distances that have been covered in varying amounts of time	Problem 2 (see manual)	Problem 2 (see manual)
Schematically presented time-distance schedule: Drawing conclusions about the speed for varying distances that have been covered in fixed time slots	Problem 3 (see manual)	Problem 3 (see manual)
Completing a time-distance graph based on a schematically presented time-distance schedule in which the covered distances and needed time intervals are given	Problem 4 (see manual)	Problem 4 (see manual)
Reading data from a time-distance graph and making the corresponding schematic time-distance schedule	Problem 5 (see manual)	Problem 5 (see manual)
Using the verbal description of travel times and covered distances for making the corresponding time-distance graph	Problem 6 (see manual)	Problem 6 (see manual)
Drawing conclusions about speed based on a time-distance graph	Problem 7 (see manual)	Problem 7 (see manual)

How to continue?

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- Complete tests metric system and graphs
- Last meeting

Next meeting

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- Evaluation Metric sytem
- Evaluation Graphs

- General evaluation

- Information about further use of the DAE
- How to proceed?

Important dates

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Week number	Date	1st FaSMEd meeting
…	…	Completing Test A percents
…	…	Completing Test A fractions
…	…	**2nd FaSMEd meeting**
…	…	Completing Test A metric system
…	…	Completing Test A graphs
…	…	**3rd FaSMEd meeting**

Finally

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- Questions/problems progress?
  Send an e-mail to

<your e-mail address>

- Questions/problems DAE?
  Send an e-mail to

M.J.Abels@uu.nl (Mieke Abels)

Colophon

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