Question 4, 5 (and 6). Dimensions, measures and granularity, true to the grain

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| Student utterance | DSSA utterance | Constraint (triggers are bold) | Additional required knowledge (domain model) | Comment |
|  | Do you want to test your knowledge about multidimensional modeling? |  |  |  |
| Yes |  |  |  |  |
|  | Please explain what true to the grain means |  |  |  |
| it must be possible to associate one single value of each dimension to a given fact  or:  dimensions must have one unique value for each fact |  |  |  | find synonyms to make more answers valid  associate:  value: instance, record.  **Challenge**: interpreting semantics |
|  | That’s correct. Now an example. |  |  |  |
|  | A telecommunication company offers classical landline telephone connections as a service to individual and business customers. Various business stakeholders within the company have an interest in analyzing the way in which customers use their connections, e.g. for designing new service offerings. For analyses, a multidimensional model has been proposed, in which a single fact is defined as a monthly bill being sent out to a customer. |  |  |  |
|  | Is the dimension *call duration* true to the grain? |  |  |  |
| Yes |  |  |  |  |
|  | Unfortunately, that is false. *Call duration* is too fine, because the bill is for the total duration of ALL calls for that month. |  |  |  |
|  | What about *customer*? |  |  |  |
| Yes |  |  |  |  |
|  | Correct! Each customer receives one bill, so this is true to the grain. |  |  |  |
|  | Is *call target* true to the grain? |  |  |  |
| No | Correct! |  |  |  |
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