

Mathematical Knowledge for Teaching 3-D Shapes

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Veronica

- In her fourth year teaching
- Most experience has been with 2nd/3rd class
- Lively and energetic in the classroom
- Promotes discourse among pupils
- Encourages pupils' responses



From:

http://3.bp.blogspot.com/_mbWThvBk2kA/SV41z5776hI/AAAAAJ7k/gKENjdmhb_I/s320/WomanSilhouetteSML.jpg

Beliefs about Mathematics Teaching

- Maths is relevant
- Teaching about Money
- A good lesson is one “that the children enjoy, that they can relate to, whether they can see it or they can feel it or touch it” like shapes or materials for regrouping

Mathematical Knowledge

- 57th Percentile
- Mathematical quality of Instruction

MKT Test Item

24. Mrs. McKenna is planning mini-lessons for students focused on particular difficulties that they are having with adding columns of numbers. To target her instruction more effectively, she wants to work with groups of students who are making the same kind of error, so she looks at some recent classwork to see what they tend to do. She sees the following three student mistakes:

$$\begin{array}{r} \text{I)} \quad 38 \\ \quad 49 \\ \hline + 615 \\ \hline 142 \end{array}$$

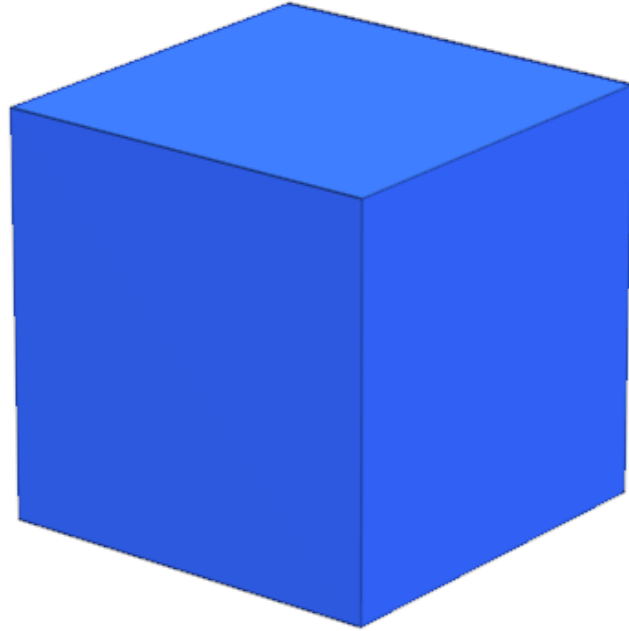
$$\begin{array}{r} \text{II)} \quad 45 \\ \quad 37 \\ \hline + 219 \\ \hline 101 \end{array}$$

$$\begin{array}{r} \text{III)} \quad 32 \\ \quad 14 \\ \hline + 119 \\ \hline 64 \end{array}$$

Which have the same kind of error? (Mark ONE answer.)

- a) I and II
- b) I and III
- c) II and III
- d) I, II, and III

How many corners?





Cylinders ?



Cylinder ?



Cone ?



Cone?



Cone ?



Cuboid (Rectangular Prism) ?



Cube ?



Cube ?



Prism ?







<http://img.timeinc.net/time/daily/2007/0701/nholding0118.jpg>