

Increasing Rigor in a Math Task

Memorization	Procedure without a Connection
Procedure with a Connection	Doing Math

Characteristics of Math Tasks

Memorization

What are the decimal and percent equivalents for the fractions $\frac{\quad}{2}$ and $\frac{\quad}{4}$?

Fraction	Decimal	Percent
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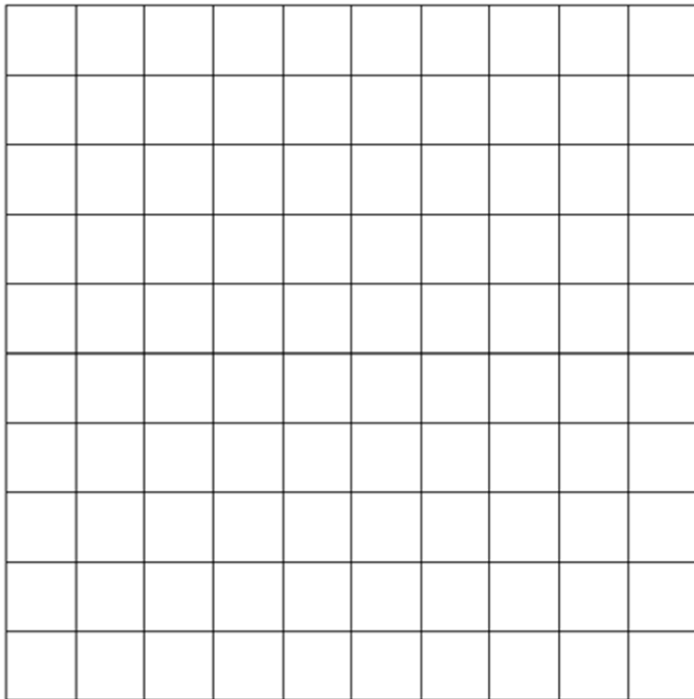
Procedure **without** a Connection

Convert the fraction $\frac{\quad}{8}$ to a decimal and a percent.

Fraction	Decimal	Percent
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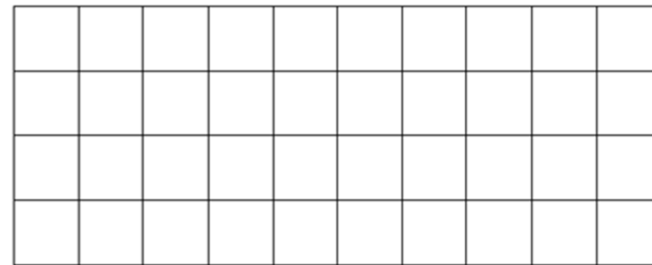
Procedure **with** a Connection

Using this 10x10 grid, identify the decimal and percent equivalents of $\frac{\quad}{5}$



Doing Math

Shade $\frac{\quad}{5}$ small squares in a 4x10 rectangle. Using the rectangle, *explain* each of the following: The percent of the area shaded, The decimal part of the area that is shaded, The fractional part of the area that is shaded

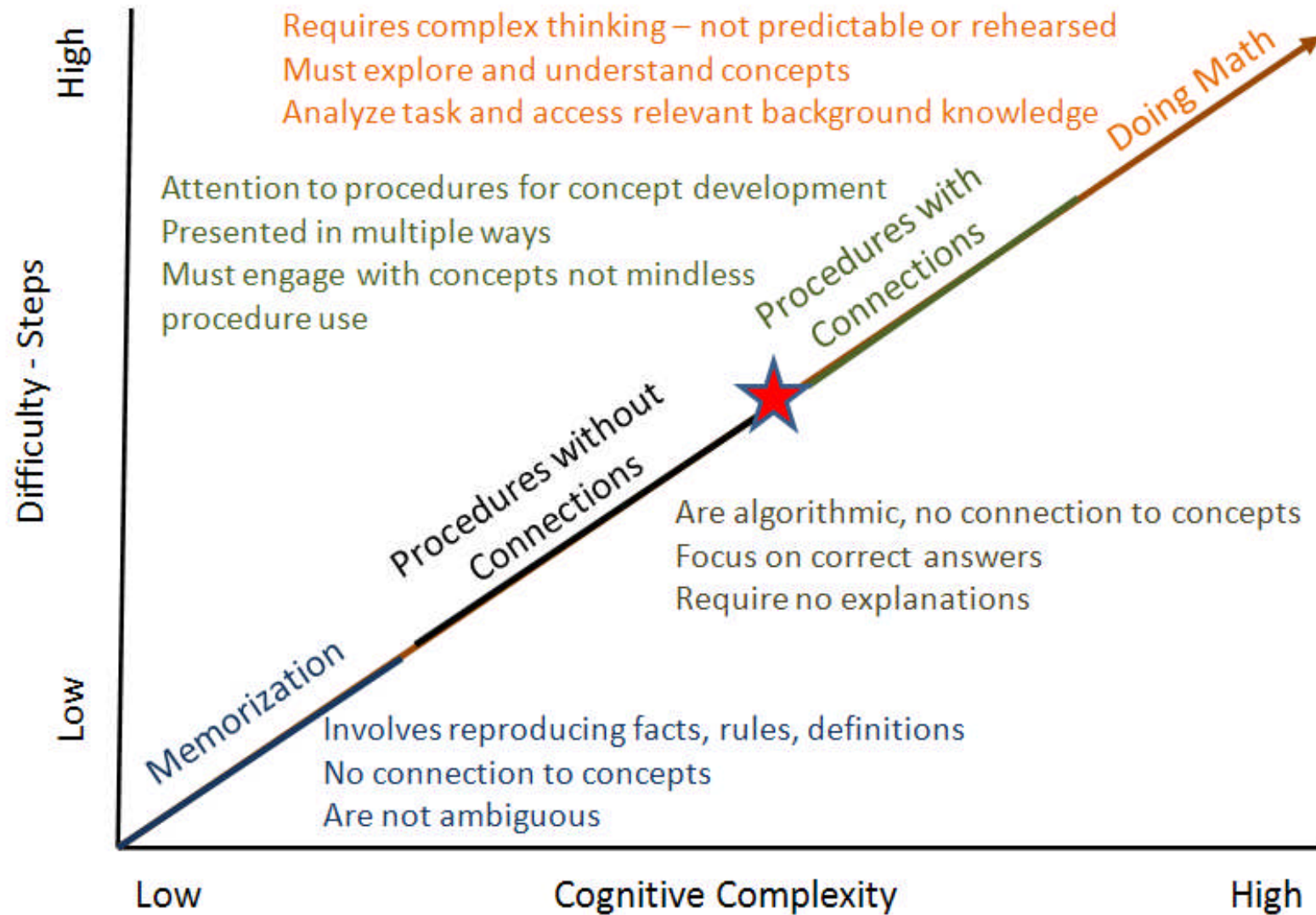


One column will be 10% since there are 10 columns. So four squares is 10%. Then 2 squares is half a column and half of 10% which is 5%. So the 6 shaded blocks equal 10% plus 5% or 15%.

One column will be .10 since there are 10 columns. The second column has only 2 squares shaded so that would be one half of .10 which is .05. So the 6 shaded blocks equal .1 plus .05 which equals .15.

Six shaded squares out of 40 squares is $\frac{6}{40}$ which reduces to $\frac{3}{20}$.

Characteristics of Math Tasks



Adapted from NCTM-Mathematics Teaching in the Middle School