



Big Ideas of Mastery: Fluency

Messages

1. Fluency demands more of learners than memorisation of a single procedure or collection of facts. It encompasses a mixture of efficiency, accuracy and flexibility.
2. Quick and efficient recall of facts and procedures is important in order for learners' to keep track of sub problems, think strategically and solve problems.
3. Fluency also demands the flexibility to move between different contexts and representations of mathematics, to recognise relationships and make connections and to make appropriate choices from a whole toolkit of methods, strategies and approaches.

If students are fluent in being able to add and subtract fractions then they should see all of these as having the same structure, the fact that some have variables in them should not unsettle them, they should simply see the format and decide that the parts need to be the same size in order to add or subtract, make the denominators the same and create their equivalent fractions.

1. Calculate the following

a) $\frac{1}{3} + \frac{1}{4} =$ b) $\frac{4}{5} + \frac{3}{15} =$ c) $\frac{2}{3} + \frac{12}{13} =$ d) $\frac{1}{x} + \frac{9}{x} =$ e) $\frac{x}{6} + \frac{x}{7} =$ f) $\frac{x}{7} + \frac{y}{5} =$ g) $\frac{x-1}{3} + \frac{2x}{5} =$

2. Calculate the following

a) $\frac{2}{5} - \frac{1}{9} =$ b) $\frac{1}{5} - \frac{5}{25} =$ c) $\frac{1}{5} - \frac{3}{8} =$ d) $\frac{10}{x} - \frac{6}{x} =$ e) $\frac{x}{4} - \frac{x}{7} =$ f) $\frac{x}{3} - \frac{y}{4} =$ g) $\frac{x+2}{3} - \frac{y}{4} =$

3. Calculate the following

a) $\frac{1}{3} + \frac{3}{4} - \frac{2}{5} =$ b) $\frac{1}{3} + \frac{3}{7} - \frac{1}{3} =$ c) $\frac{6}{8} - \frac{1}{4} + \frac{5}{10} =$ d) $\frac{3x}{12} + \frac{2x}{8} - \frac{5x}{10} =$

What is significant for me:

What I plan to work on: