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Chapter 12 - Questioner

1.) Page 216 of our text suggests that student invented strategies provide benefits such as:

* Students make fewer errors
* Less reteaching is required
* Students develop number sense
* Invented strategies are the basis for mental computation and estimation
* Flexible methods are often faster than the traditional algorithms
* Algorithm invention is itself a significantly important process of “doing mathematics”

How do you, as a future educator, feel about student invented strategies?

Have you as a student (before our current math methods course) experienced invented strategies in a classroom? How were they taught? Were the successful?

2.) The “Empty Number Line” shown on page 219 is a technique developed in the Netherlands and has been suggested for use in the United States. Research suggests that the empty number line is more flexible, because it can be used with any number and confusion isn’t prevalent due to the lack of hash marks.

Do you believe this technique is beneficial for students? Could it hinder their learning?

3.) When students begin multiplying large numbers, there are many algorithms and invented strategies that can provide a student with the correct answer. If you have a student who persists to use repeated addition, without ever really “multiplying,” what techniques would you use to help him or her?

4.) Do you think that both traditional algorithms and invented strategies should be used in a classroom or do you think that one or the other should be phased out?

Bloom’s Taxonomy

|  |  |
| --- | --- |
| Knowledge | Katie, please tell me the answer to 6 x 34? |
| Comprehension | Can you explain how you came up with your answer? |
| Application | Now can you draw a picture that shows me how you came up with your answer? |
| Analysis | Is there another strategy that we can use to come up with the answer to 6 x 34? |
| Synthesis | Can you predict what the answer would be if the question were 60 x 34? |
| Evaluation | Describe the change in value from the answers 6 x 34 and 60 x 34. |