

Calculator Calisthenics

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Learn the Facts! Multiplication, That Is!

This game uses the hand-held calculator to help the elementary pupils learn the multiplication facts. It is proving more effective than flash cards and motivates much more interest than ordinary drill procedures. It is very simple and requires minimal involvement or supervision by the teacher. The game can be used for an entire class where there is one hand-held calculator available for each pair of students. However, it is equally effective when used at a learning center where only two or three calculators are available.

Have two students assigned to each calculator (Student X and Student Y). Student X is on Team 1 and Student Y is on Team 2. This way half of the class constitutes Team 1 and the other half Team 2.

Each pair has a score sheet marked "Team 1" and "Team 2."

Place the calculator on the desk so both players can see the keyboard and readout.

Each Student X enters any multiplication problem he chooses into the calculator, say 6×8 .

Student Y observes the problem entered and states the answer "48," and then Student Y presses the "=" key. The answer given agrees with the calculator readout "48." Team 2 gets one point.

Student X enters another problem, say 7×9 . Student Y answers "73" and presses the "=" key. The answer in the readout "63" does not agree with the answer given. Team 1 gets one point.

Student X enters three more problems (five in all). Then Student Y enters five problems for Student X to answer. They continue in this manner until the teacher states that time is up.

The teacher now adds all Team 1 scores and all Team 2 scores to determine which team is ahead.

The teacher can set the guidelines at the beginning of the game to suit her pupils' needs. For example, she can limit the problems given to those using the digits 0, 1, 2, 3, 4, 5, or she can limit it to one-digit factors. One teacher told the class to use two-digit factors and said the student giving the answer could use paper and pencil before answering. The game can be used also for the addition facts in the primary grades. The general format of the game is adaptable to many teacher options.

Once the game is begun, the students do it all themselves. They choose the problems. They determine which team gets the point. It is interesting that they tend to use the very facts where drill is most needed. Since the object of the game is to give the opponent a difficult problem which he might miss, the students tend to drill on the very facts they consider the most difficult. They can ask a problem even if they are not certain of the answer since the calculator will supply the correct answer.

This game is the outgrowth of the comments of a distraught fourth-grade teacher. When I visited her classroom a few weeks ago, she told me that she would not use calculators in her mathematics lessons until her students learned their multiplication facts. She told me if I came up with a way to teach the facts, she would use the calculators. This challenge led to this simple little game. It has been used now by several teachers in the fourth, fifth, and sixth grades in a large metropolitan school system and all report that the pupils really enjoy the game and become involved. We have reason to believe that a few minutes of playing this game each day will noticeably improve retention of the multiplication facts.

So teachers, let those little electronic wonders work to your advantage and your students' pleasure. Happy Calculator Calisthenics!! ■