

DOING HOMEWORK = TEST SUCCESS
THE SIXTY SECOND SWEEP
(LESSON PLAN)

Objective: To produce a strategy whereby students relate the importance of homework and practice of math skills to test results.

Directions:

Step 1: Have students pair up and have access to either a stopwatch, cell phone with a stopwatch, or watch or clock with a second hand.

Step 2: Hand out a double-sided page of the Sixty Second Sweep to each student.

Step 3: Assuming students are already at a point in math where they know their multiplication tables, explain to students that they are

- Going to be timed and their goal is to create "fact families" for everything on the sheet in 60 seconds or less
- To use only the whole numbers 2 through 9 to create "fact families" with the numbers on the page as the product
 - Students may not use numbers 1 or 10
- Going to state the fact families as quickly as possible without wasting time saying "times" or "equals" and stating the product at the end.

Note: The order of the numbers coming before the product does not matter!

- Model by demonstrating the first row of numbers (4, 6, 8, 9, and 10) as
 - 2, 2, 4 (at this point, ask which two numbers multiplied together = 6)
 - 2, 3, 6 (at this point, check for understanding by having them do the 8, then finish off the rest)
 - 4, 2, 8
 - 3, 3, 9
 - 5, 2, 10 (remind them not to say 1, 10, 10, as they need to only use whole numbers from 2 through 9)
- Going to use two sets of fact families for the middle row (12, 16, 18, 24, and 36)
 - Demonstrate using the number 12
 - 3, 4, 12
 - 6, 2, 12

- Step 4:** Have students decide who will be the person timing and who will be the one stating the fact families.
- Have the students who are stating the fact families raise their hands
 - Ask if they understand what they are to do
 - Inform the other party that they must actively listen to catch any errors
- Step 5:** Allow them to begin stating and timing as soon as they're ready, and explain to keep the timing going even if they go over the 60 seconds so that the student calling the "fact families" can see how much time needs to be taken off for him or her to reach 60 seconds.
- Step 6:** After both students have had the opportunity to do the 60 second sweep, have them answer the questions on the following page, including the discussion question.
- Step 7:** Once students have completed their responses, open the discussion to the class. List student responses to the discussion question as well as anything students have put under the sections marked *Other*. Students should naturally see that if they knew the information well and practiced it often, they would have done better. Lead the discussion (if necessary) to help students understand the important relationship between doing math homework and being successful on math tests while reducing anxiety.
- Beyond the Objective ~ Given the strategies for success, challenge students to follow through with practice to be able to do the Sixty Second Sweep in 60 seconds or less.**
- Step 8:** Show the students the Sixty Second Sweep page where they may fill in the answers, and allow them to do so at home.
- Step 9:** Have students bring their blank and filled out pages to class daily.
- Step 10:** Have students practice with a partner, or in groups of three, at the beginning of each class to build their skills and get their minds thinking about number relationships.
- Step 11:** As students feel ready, have them try it with one official time keeper chosen by the instructor and the class listening to see if they make any mistakes.

Beyond the Objective Results: As each student eventually becomes successful at calling out the Sixty Second Sweep in a minute or less without mistakes, there will be concrete evidence provided to students that practice with math skills is one of the best strategies for student success on tests. This exercise also encourages teamwork and a desire for students to both help and encourage each other. Students will root for each other's success!

Reward Options:

Give bonus points based on how quickly students succeed. The first person to do it gets 5 points. Within the next week, students get 4 points. Two weeks later, students get 3 points each, etc.

Offer to have a pizza party, bring candy, sing a silly song in front of the class or other dare, or (student choice here) one day if 95% of the class is successful within a certain time frame.

Name _____

Directions: Take a moment to reflect on how you felt and what you did during the test before answering the questions below. Answer Y for Yes and N for No.

1. If you had no time restrictions, do you feel you would have done better? ___Y ___N
2. Do you prefer a test that has no time restrictions or is easily finished within the amount of time provided? ___Y ___N
3. Did the time pressure affect some of your answers? ___Y ___N
4. If you answered "Y" for number 3 above, which of these things happened to you (mark all that apply)

___ I felt anxious

___ It was difficult to think

___ I made mistakes and had to catch them and correct them

___ I made mistakes I didn't catch

___ I was forgetting facts I knew

___ I realized I didn't know my multiplication facts very well

___ Other: _____

5. If you knew you were going to be asked to do this, what would you have done ahead of time to prepare for it? (mark all that apply)

___ Nothing new, I know my multiplication facts inside and out

___ Practiced these ahead of time

___ Made sure I knew my times tables

___ Used a timer to time myself

___ Studied and practiced with someone else

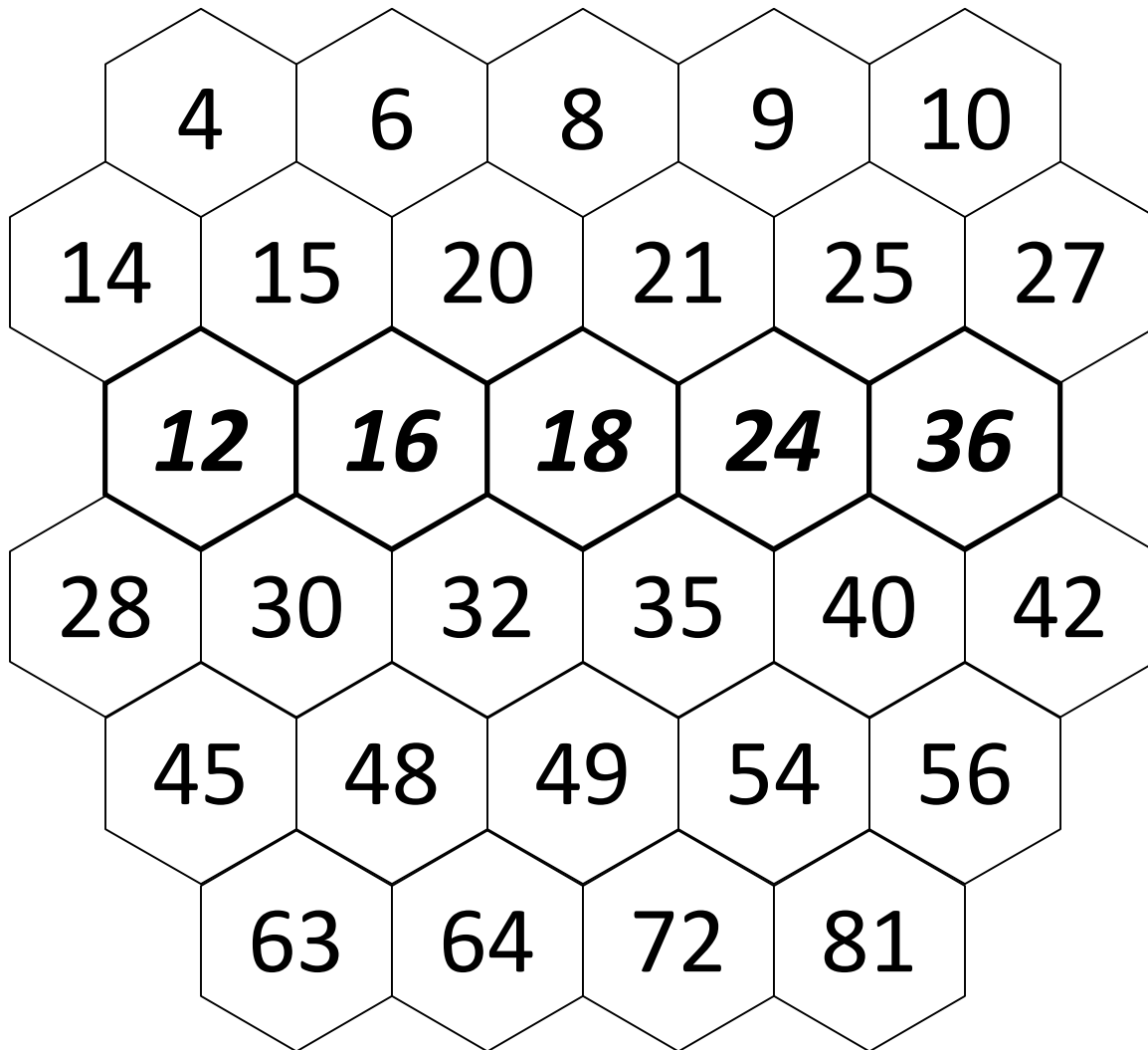
___ Other: _____

Discussion question: How does this relate to taking an exam in class? Write your answer here:

60 SECOND SWEEP

Use only numbers 2 through 9 to create "fact families" used in multiplication with the number in the center as the product. Do not say "times" or "equals". For example, on the first row, say, "2, 2, 4 ~ 3, 2, 6 ~ 2, 4, 8," etc.

(3RD ROW has 2 sets of FACT FAMILIES)



60 SECOND SWEEP FILL IN
(3RD ROW = 2 "FACT FAMILIES")

4 6 8 9 10

14 15 20 21 25 27

$\overset{\times}{12}$ $\overset{\times}{16}$ $\overset{\times}{18}$ $\overset{\times}{24}$ $\overset{\times}{36}$

28 30 32 35 40 42

45 48 49 54 56

63 64 72 81