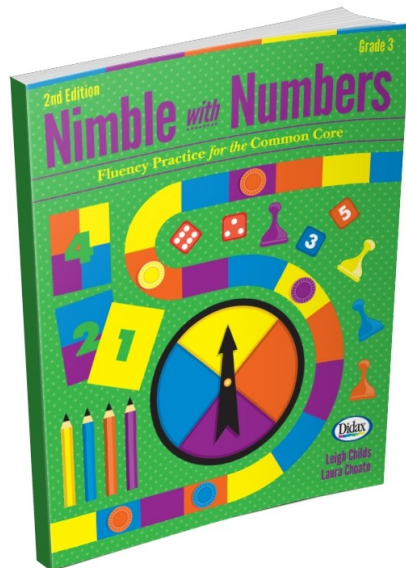




Nimble with Numbers

Fun for Grades 1-6 | Subtraction: Diffy



Here's how to adjust this game for learners of all levels:

ALL students will benefit by practicing mental subtraction, so we

are including a popular warm-up activity that's great for all grade levels. "Diffy" can easily be tailored for learners of all ages. For young learners begin with 4 different numbers under 13. Proceed to different numbers under 20, then different multiples of 5 under 50. Gradually increase the difficulty with different numbers under 30, ... under 50, ... between 50 & 100, ... between 75 and 110. Eventually try 4 different numbers between 140 and 200, as suggested in the activity's

"directions." Be aware that some combinations at all levels will require extending the pattern to accommodate additional differences.



Topic: Mental subtraction

Object: Find differences until all differences equal the same amount.

Materials

- *Diffy* Activity Sheet, p. 76
- *Diffy* Recording Sheet for each student, p. 77

Directions

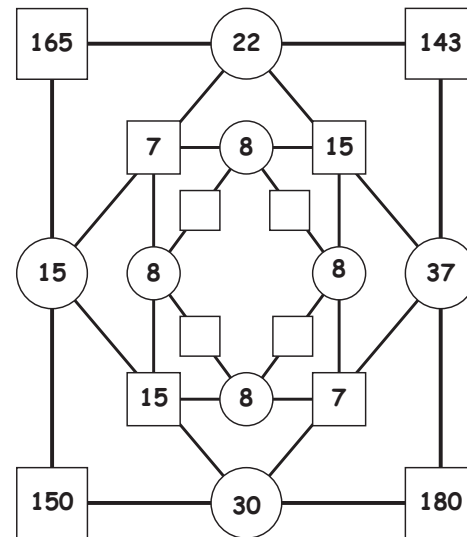
1. Students suggest four different numbers between 140 and 200. Leader records these numbers in the four corner squares. Students record these numbers on one of their recording sheet forms.
2. Students subtract the corner numbers from each other and record the differences in the circles between them.
3. Students subtract the four new differences from each other and record those differences in the squares between them.
4. Students continue this process until all four new differences match. Ask, “How many rounds of subtraction were required?”
5. Students start the process over again with four new numbers until four different *Diffy* puzzles are completed. Ask, “Which number combination seemed to require more subtractions?”
6. Students compare and contrast their results, seeking possible patterns. As students gain more confidence, provide a more challenging range for starting numbers, like 275–330. For students needing more practice, have all starting numbers be multiples of 5 between 60 and 120.

KEY STANDARD

Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. (3.NBT.A.2)

Tips To easily reuse the displayed *Diffy* sheet, use a blank transparency on top of the sheet.

Use the *Diffy* recording sheet with numbers prerecorded in the four outside corner squares to provide an additional independent practice activity.



Making Connections

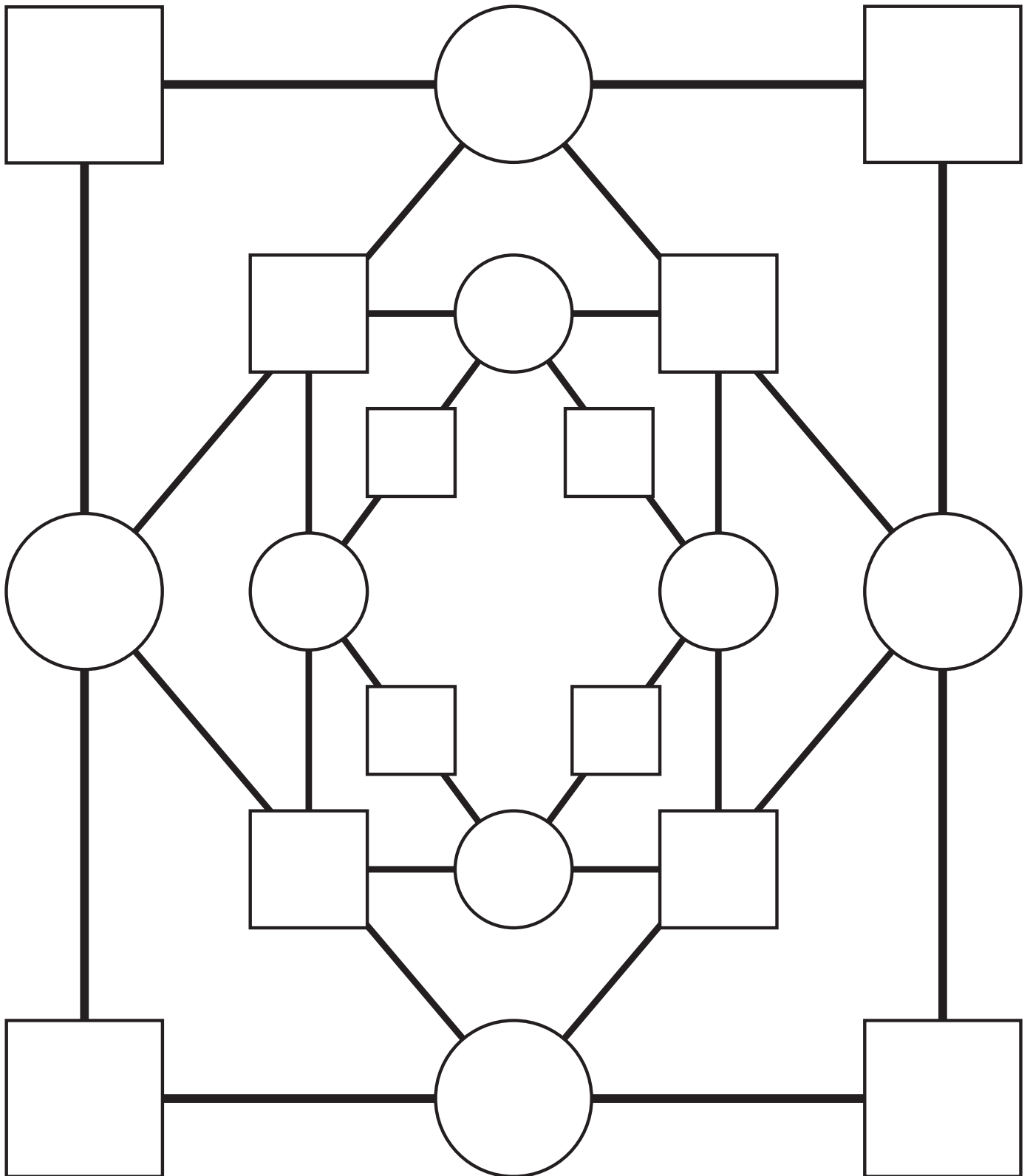
Promote reflection and make mathematical connections by asking:

- Which number combinations require three or fewer subtraction rounds?
- Does it make a difference if the placement of the corner numbers is changed?

Acknowledgment: This activity is adapted from *Drill and Practice at the Problem Solving Level*, by Robert W. Wirtz, Curriculum Development Associates.



Diffy





Recording Sheet

