

THREE-WAY TIE

Purpose

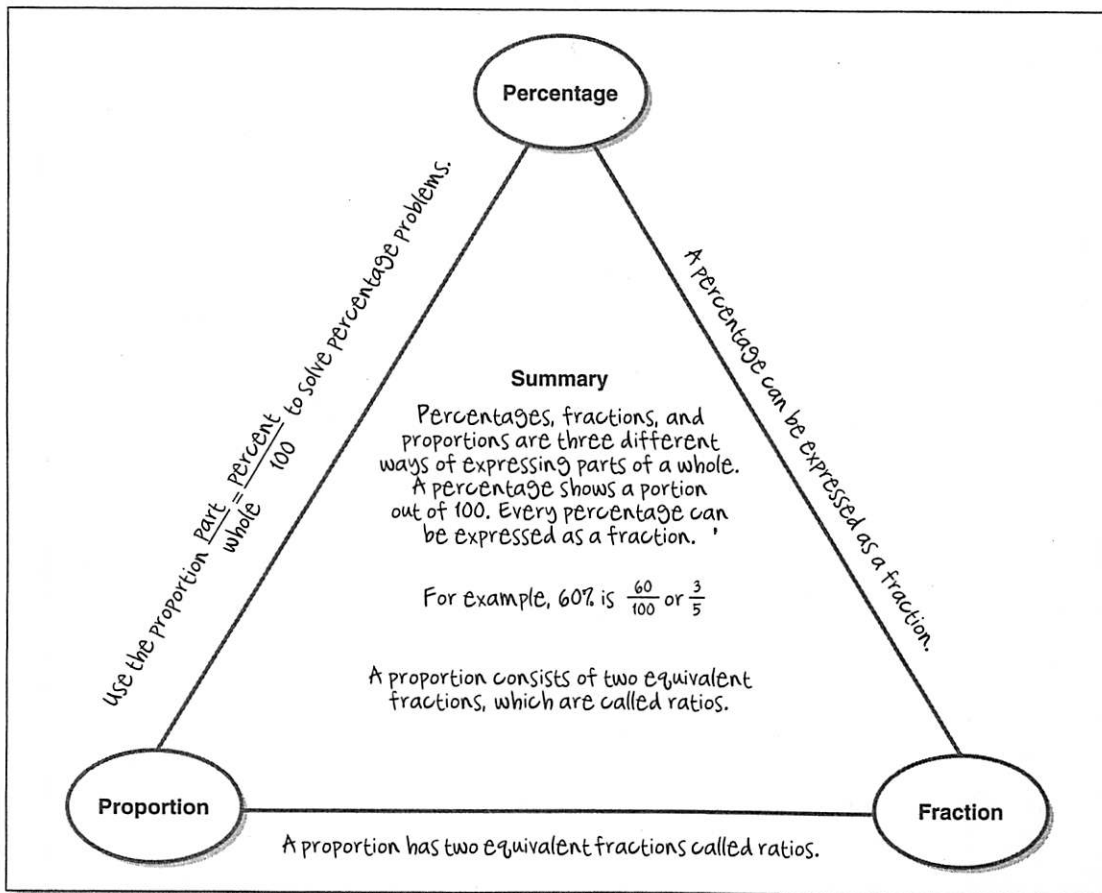
A deep understanding of mathematical content means more than knowing what the key concepts are; it also means understanding how these concepts are related, how they fit together to form a bigger picture. Three-Way Tie gives students the opportunity to focus their attention on these hidden relationships. Students identify the relationship between pairs of critical concepts or terms and then distill their understanding of the relationship into a single sentence.

Formative Assessment Connection: Students demonstrate not only their understanding of key vocabulary, but also how well they understand and can explain the relationships between these terms.

Overview

Three-Way Tie uses a triangle organizer that connects three separate but interrelated terms. Students examine the terms, determine the relationships between each pair of words, and then explain the relationship in one sentence along each side of the triangle. (Figure 2.14 shows a completed Three-Way Tie Organizer.)

Figure 2.14 Student's Three-Way Tie for Percentage, Proportion, and Fraction



Visit the companion website for a blank "Three-Way Tie Organizer."

What makes Three-Way Tie such a potent technique is the way it forces students to cut to the heart of the content, to refine and communicate their thinking about three important concepts in only a few well-chosen words.

Building Common Core Thinking

Three-Way Tie strengthens students' working vocabulary. A powerful vocabulary is making sense of mathematical concepts and explaining relationships in descriptive and insightful ways. Three-Way Tie supports the following Standards for Mathematical Practice (MP):

- ☞ (MP 1) *Sense*: monitoring and evaluating progress and willingness to consider the approaches of others
- ☞ (MP 6) *Precision*: creating carefully formulated explanations

ELA Note: Three-Way Tie can also help support the Common Core Anchor Standard for Language related to vocabulary acquisition and use (L.CCR.6).

Steps

1. Identify an important mathematical concept.
2. Graphically “triangulate” the concept with two related terms or concepts. Alternatively, you can have the students generate the three terms themselves by selecting the three most important ideas in a reading or unit.
3. Along each side of the triangle, the student writes a sentence that clearly relates the two terms.
4. Have students use their three sentences to develop a brief summary of the concept.
5. Allow students time to share and explain what they wrote on their organizers.

Examples

Figure 2.15 Potpourri of Three-Way Tie Starters

