

Concept Relationship Frame

Problem/Solution

Either/Or

Compare/Contrast

Cause/Effect

Make the distinction between:

unitary and common fractions

Unitary Fractions

unitary fractions are fractions with only one unit as the numerator

eg $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$



Common Fractions

common fractions are fractions that have several units as the numerator. The numerator is still smaller than the denominator

$\frac{2}{3}$, $\frac{4}{6}$, $\frac{7}{8}$

types of

Write a summary statement:

Bothⁿ fractions can be used to describe part of a whole, or the portion of a set. Neither fraction is improper.

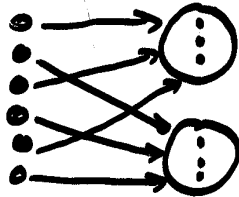
Compare and Contrast Frame

Unit NUMBER

Topic MULTIPLICATION

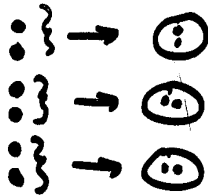
C
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How are MULTIPLICATION and DIVISION alike?



$$\begin{array}{l} 2 \times 5 = 10 \\ \text{so} \\ 10 \div 5 = 2 \end{array}$$

$$6 \div 2 = 2 \times 3$$



$$6 \div 2 = 3 \times 2$$

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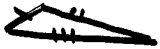

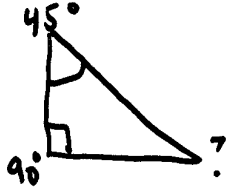
How are multiplication and division different?

- multiplication is repeated addition
- division is repeated subtraction
- multiplication of positive numbers makes larger numbers
- Dividing positive numbers makes smaller numbers

Write a statement to compare and contrast the two terms, concepts, or events.


- the inverse relationship of mult. is division
- both deal with numbers in groups

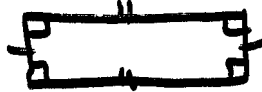

Concept Frame

<p>Concept TRIANGLES</p>	<p>Examples</p> <p>equilateral </p> <p>scalene </p> <p>obtuse</p> <p>right</p> <p>isosceles </p>	
<p>Characteristics</p> <p>3 sides</p> <p>3 vertices</p> <p>3 angles</p> <p>polygon</p> <p>closed shape</p>		
<p>What is it like?</p> <p>Other polygons because it is a closed figure with straight sides</p>	<p>What is it unlike?</p> <p>Other polygons because it has 3 sides only.</p>	<p>Can you illustrate it?</p>  <p>$90^\circ + 45^\circ + ? = 180^\circ$</p>
<p>Definition</p> <p>A closed figure with 3 straight sides. The three interior angles add up to 180°</p>		

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Three-Point Approach for Words and Concepts

Definition <u>a closed polygon</u> <u>with 3 straight</u> <u>sides</u> _____ _____	Word or Concept <u>triangle</u> <hr style="border: 0; border-top: 1px solid black;"/> Synonym/Example <u>equilateral</u>	Diagram 
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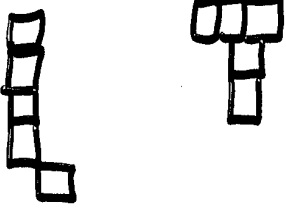
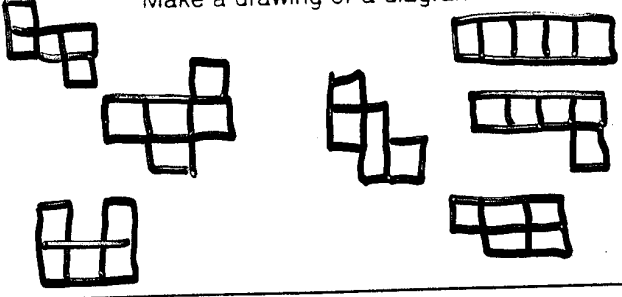
Definition <u>a polygon that</u> <u>has opposite</u> <u>sides parallel.</u> <u>All vertices are</u> <u>right angles.</u> _____ _____	Word or Concept <u>rectangle</u> <hr style="border: 0; border-top: 1px solid black;"/> Synonym/Example <u>a square</u> <u>is a special</u> <u>rectangle</u>	Diagram  
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Definition _____ _____ _____ _____ _____	Word or Concept <hr style="border: 0; border-top: 1px solid black;"/> Synonym/Example	Diagram
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Definition _____ _____ _____ _____ _____	Word or Concept <hr style="border: 0; border-top: 1px solid black;"/> Synonym/Example	Diagram
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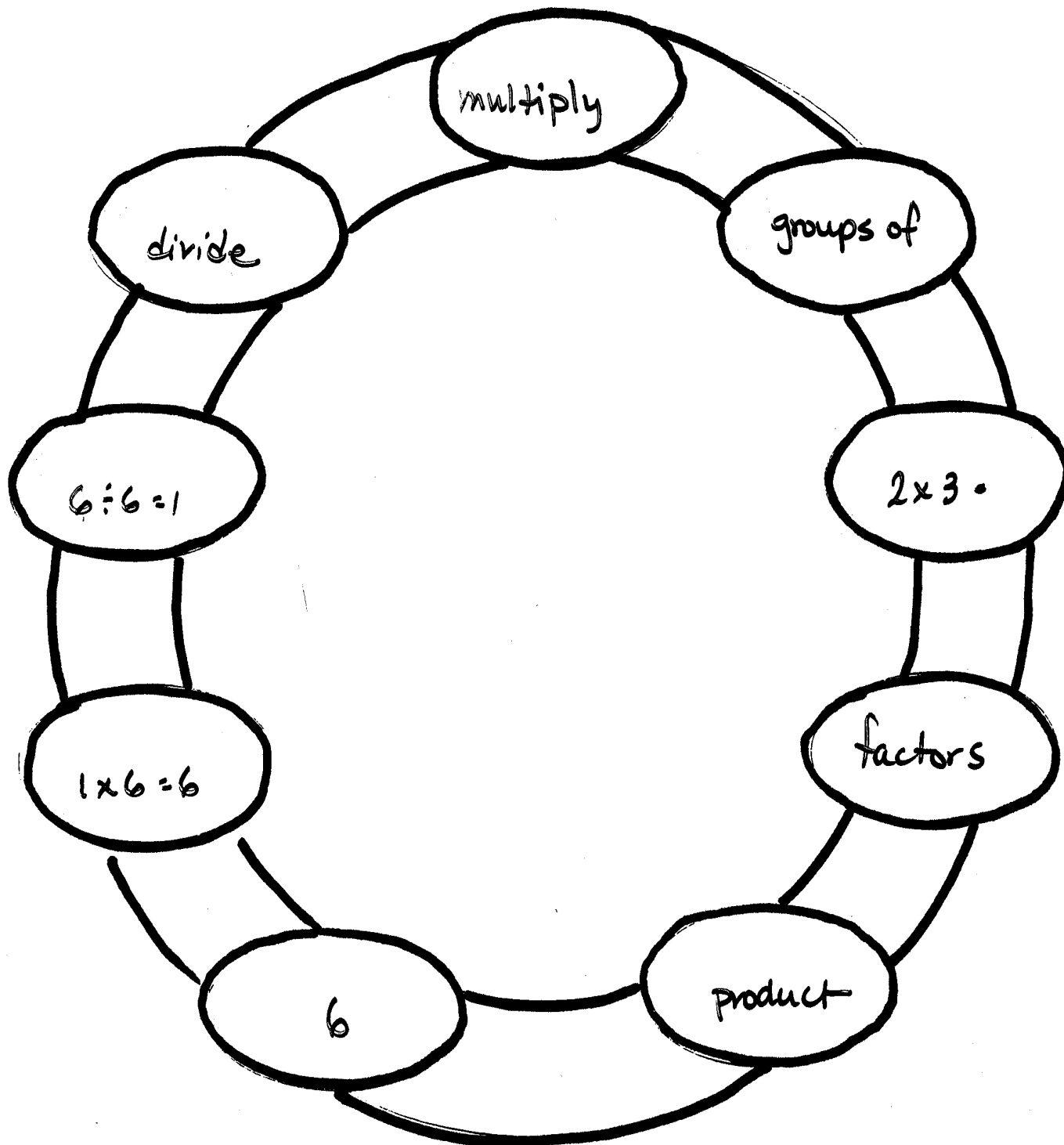
Three-Point Approach: Adapted from Simons, Sandra M. *Strategies for Reading Nonfiction*. Copyright © 1991 by Spring Street Press. Used by permission of the publisher.

Frayer Plus Concept Builder

Characteristics		
Essential characteristics Always	Non-essential characteristics Sometimes	Non-characteristics Never
<p>The area is always 5 units.</p> <p>It's perimeter can change</p>	<p>Some shapes resemble letters</p> 	<p>The area and perimeter are never the same.</p>
<p>Topic/concept</p> <p>Pentominoes (Perimeter/Shape/Area)</p>		
<p>Examples</p> 	<p>Non-examples</p> 	
<p>Make a drawing or a diagram</p> 		
<p>Definition</p> <p>A figure made from 5 equal squares so that some sides are shared.</p>		

Frayer Plus Concept Builder: Adapted from Frayer, Dorothy, Wayne C. Fredrick, and Herbert J. Klausmeier. A Schema for Testing the Level of Cognitive Mastery. Working Paper No. 16. Madison, WI: Wisconsin Center for Education Research, 1969. Used with permission.

Word Cycle



Directions:

Read the list of words in the circle above. Select one word and place it in any oval. In the next oval, place another word that is related to the first. They could be synonyms, antonyms, steps in a process, examples of something, and so on. Be prepared to finish the statement "Word A is related to word B because" Write a note on the band in between the words to remind yourself of the relationship. Continue this process until you have placed all the words. Plan ahead; the last few words will be tricky to place.