

Intellectual Prep for Number Stories

Solve first as an adult	Now solve as a student in your grade might

Date:	Story Problem Type & Magnitude:	Agenda: 3-5 Middle
Story Problem:	Potential Misunderstandings:	
Megan bought wrapping paper for a birthday party that was 2 feet long and 10 feet wide. She cut a piece that was 1 foot long and 2 feet wide. What is the area of the paper she has left?	<ul style="list-style-type: none">Using mult. for area and subtraction for differencerelationship bet numbers (ex. seeing the efficiency of 2 feet as a common side length).units	
Big Idea/Key Points:		
<ul style="list-style-type: none">We can apply what we know about addition/subtraction to area problems.If we know the length and width, we can find the whole area. If we know the whole area, we can subtract part of the area and find the remaining area (whole - part = part)We measure area in square units.		

Visualize (2 minutes)

Represent & Retell (8 - 13 minutes)

Represent/Retell:
Anticipated Reps (least to most sophisticated)

		<p>area of paper $(2 \text{ feet} \times 6 \text{ feet}) - (2 \text{ feet} \times 1 \text{ foot})$ $= ? \text{ leftover paper}$</p>
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The Decision

Share 2-3 Reps	Introduce a New Rep	Misconception Discussion
More than $\frac{1}{2}$ correct	More than $\frac{1}{2}$ correct, but only one strategy being used	Less than $\frac{1}{2}$ correct
Anticipated Discussion Question: How did — Show the part of paper Megan used? the unknown leftover paper?	Anticipated Rep that may need to be introduced: Drawing of piece of paper	Anticipated misconception to clarify: The used paper is part of the whole paper.

Corresponding Equation:

Solve (5 minutes)

Anticipated Solve Strategies
(least to most sophisticated)

grid/counting strategy

$$2 \times 1 = 2$$

$$2 \times 6 = 12$$

$$12 - 2 = 10$$

$$5 \times 2 = 10$$