

ALGEBRA METACOGNITION

Name _____

1. THE ELEMENT OF THE UNKNOWN

In algebra, a symbol is used for the unknown. The symbol is usually a letter in the Alphabet. A popular letter is the letter x .

$1 + 2 = x$ This is a mathematical statement, meaning two things are equal.

$1 + 2$ is equal to the other side - the unknown

The goal is to figure out the unknown.

$3 = x$ This is the same as $x = 3$

" x " represents an unknown number.

1. Gingerbread House Decorating
A baker is decorating gingerbread houses. She uses 12 gumdrops for each house. If she decorates X houses, and she uses 36 gumdrops in total, what is X ?

Draw your solution and explain your thinking.

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Name _____

3. THE ELEMENT OF THE UNKNOWN

In algebra, a symbol is used for the unknown. The symbol is usually a Letter in the Alphabet.

$x + 5 = 6$ This is a mathematical statement, meaning two things are equal.

$x + 5$ is equal to the other side, which is 6

The goal is to figure out the unknown.

$x = 1$ ($1 + 5 = 6$)

Algebra is like puzzle!

3. Candy Cane Count
Sarah has a bag of candy canes. She gave away 28 candy canes equally to 4 friends. How many candy canes did each friend get?

Draw your solution and explain your thinking.

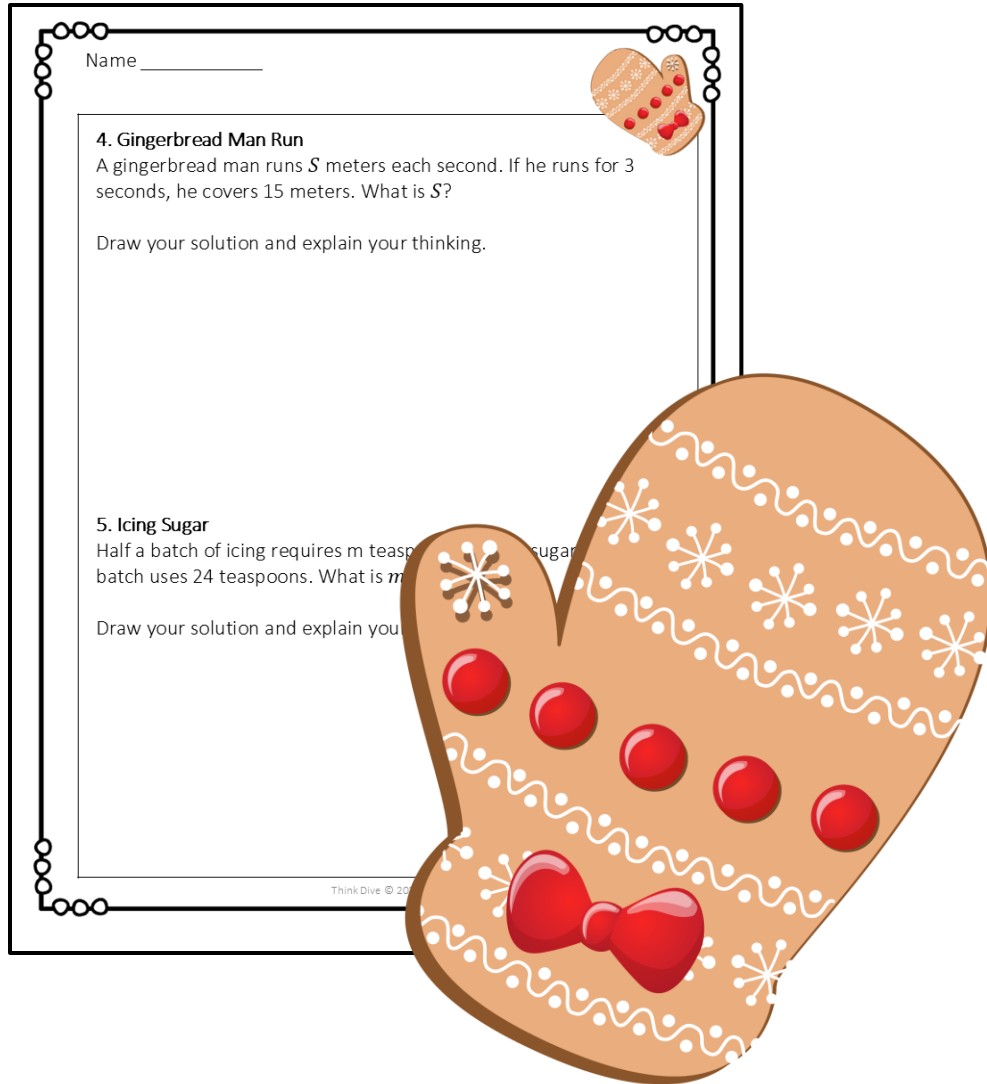
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Basic Algebra
Problem & Algebra
Word Problems.
Metacognition –
Reflection.

Color

WHAT'S INCLUDED:



9 Festive Problems

2 Metacognition –
Reflection Worksheets

Answers

Ways to Use

Algebra Units
Centers
Early Finishers
Independent Work

Name _____

2. THE ELEMENT OF THE UNKNOWN

In algebra, a symbol is used for the unknown. The symbol is usually a Letter in the Alphabet.

$1 + 5 = t$ This is a mathematical statement, meaning two things are equal.

$1 + 5$ is equal to the other side - the unknown

The goal is to figure out the unknown.

$6 = t$ This is the same as $t = 6$

Any letter can represent an unknown number.



2. Cookie Baking

A recipe calls for 2 cups of flour per batch of gingerbread cookies. If you use Y cups of flour in total, and you make 5 batches, what is Y ?

Draw your solution and explain your thinking.

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Name _____

REFLECT ON THE ALGEBRA ACTIVITIES

What Did I Do First?

- ☐ I looked for patterns
- ☐ I thought about what the unknown could be
- ☐ I used a math strategy I already knew
- ☐ I wasn't sure — I just guessed

In your own words, describe your first step:

What Strategy Did I Use?

- ☐ I used trial and error
- ☐ I drew a picture or model
- ☐ I used a number sentence
- ☐ I worked backwards
- ☐ I used a known fact or pattern
- ☐ Other: _____

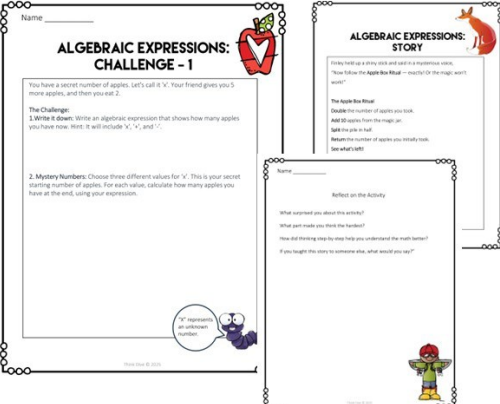
Why did you choose that strategy?



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You may like these resources!

EXPLORE ALGEBRAIC EXPRESSIONS



ALGEBRAIC EXPRESSIONS: CHALLENGE - 1

Name: _____

You have a secret number of apples. Let's call it x . Your friend gives you 5 more apples, and then you eat 2.

The Challenge:
1. Write it down: Write an algebraic expression that shows how many apples you have now. Hint: it will include x , $+$, and $-$.

2. Mystery Numbers: Choose three different values for x . This is your secret starting number of apples. For each value, calculate how many apples you have at the end, using your expression.

ALGEBRAIC EXPRESSIONS: STORY

Helpy had a whole lot of apples in his magic sack.
"How many in Apple Box Road - exactly? Or the magic sack's worth?"

The Apple Box Road
Double the number of apples you took.
Add 10 apples from the magic jar.
Subtract the apples in a hat.
Multiply the number of apples you finally took.
See what you get!

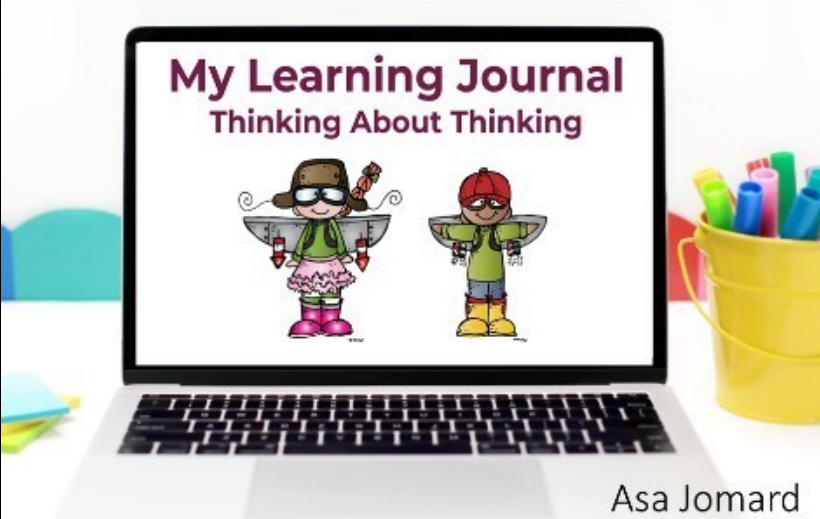
Reflect on the Activity

What surprised you about this activity?
What part made you think the hardest?
How do thinking strategies help you understand the math better?
If you taught this story to someone else, what would you say?

**MATH
CHALLENGES
GRADE 4**

Asa Jomard

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**My Learning Journal
Thinking About Thinking**

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THINK DIVE - SPARKING CHILDRENS THINKIBILITY



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