Blurring the Lines Between Assessment and Instruction

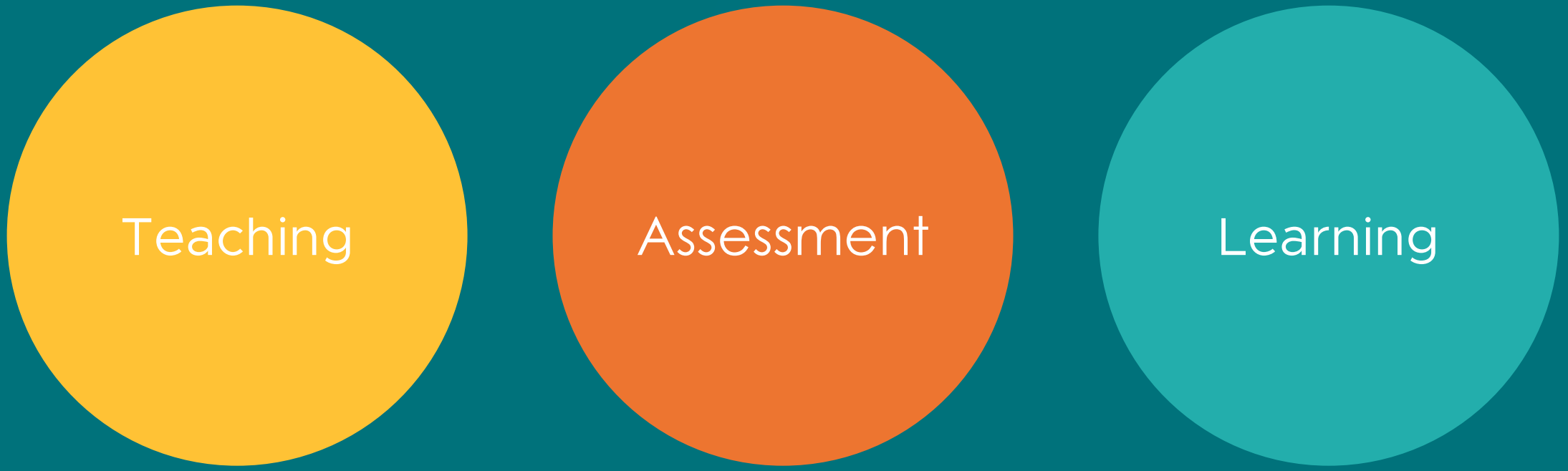
ZACHARY CHAMPAGNE

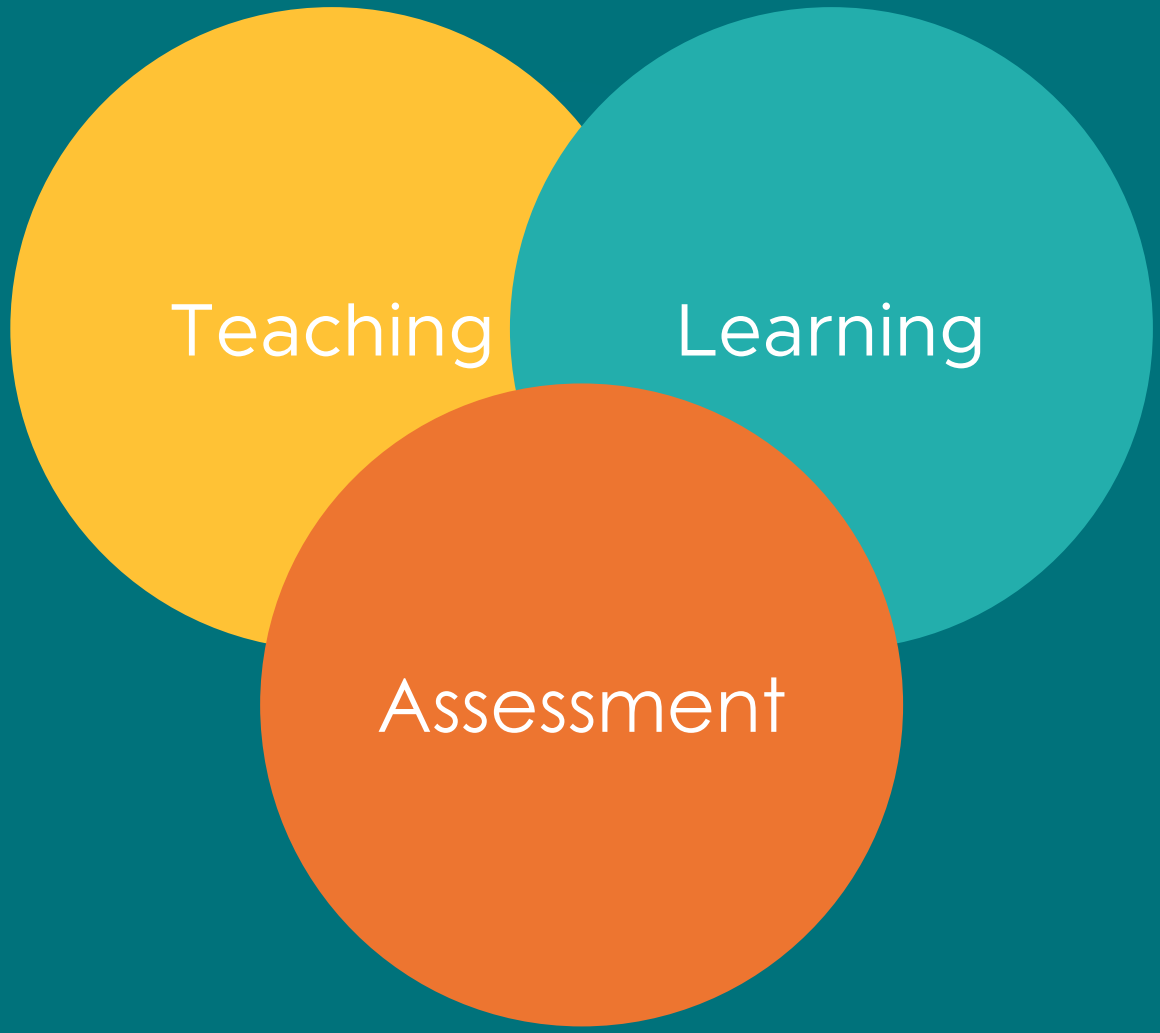
zakchamp.com | @zakchamp | *zacharychampagne@gmail.com*

Kids Have Important Mathematical Ideas

Teaching
Learning
Assessment

Assessment
Learning
Teaching


Teaching
Assessment
Learning


Teaching
Learning
Assessment

Teaching
Learning
Assessment

When Assessing Students, What Matters?

-How they are thinking about the mathematics
-What they know and understand (rather than what they don't know)
-How it can inform our instruction
-What is their relationship with mathematics
-The wording/presentation of the task

Consider This Task

DANIEL RODRIGUEZ QUINTANA/THINKSTOCK

Name_____

The Cycling Shop

Imagine you work at a cycling shop building unicycles, bicycles, and tricycles for customers. One day, you receive a shipment of 8 wheels. Presuming that each cycle uses the same type and size of wheel, what are all the combinations of cycles you can make using all 8 wheels?

From the August 2016 issue of teaching children mathematics

Imagine you work at a cycling shop building unicycles, bicycles, and tricycles for customers. One day, you receive a shipment of 8 wheels. Presuming that each cycle uses the same type and size of wheels, what are all the combinations of cycles you can make using all 8 wheels?

Unicycles	Bicycles	Tricycles	Total Wheels

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8	0	0	8

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Unicycles	Bicycles	Tricycles	Total Wheels
8	0	0	8
6	?	?	?

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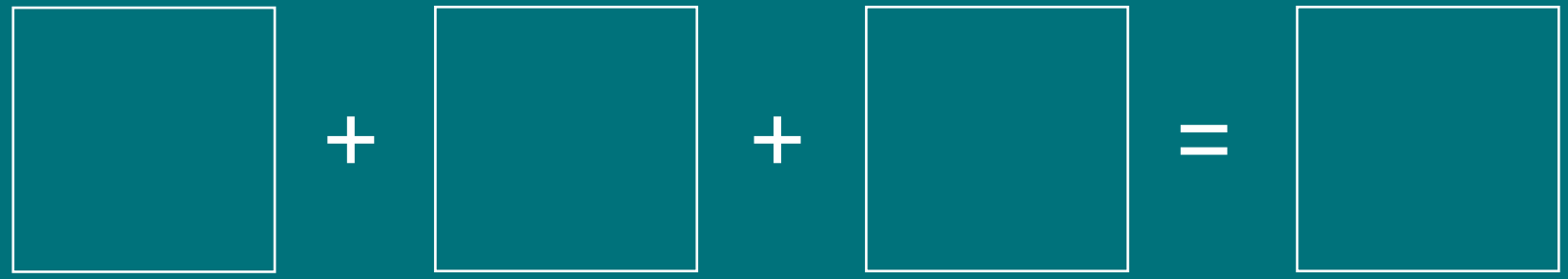

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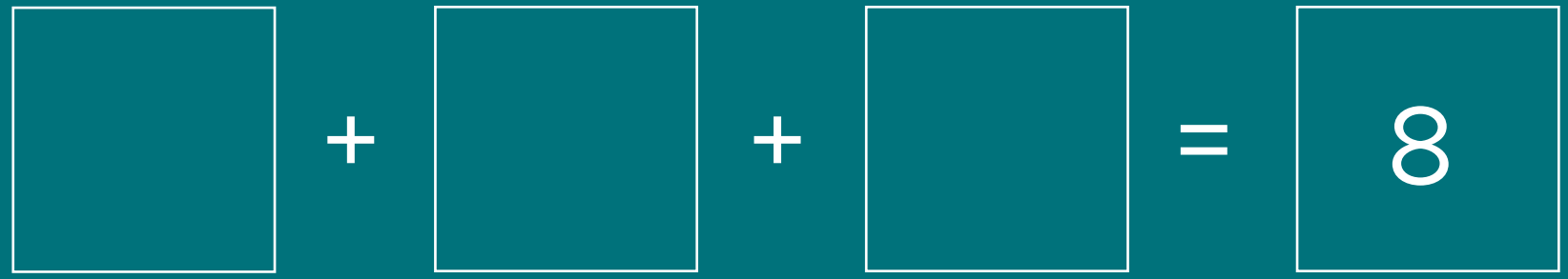

Consider All That You Can Learn With Just a Blank Page

Tweet

Florida Department of Education Retweeted

Ron DeSantis
@GovRonDeSantis

Math is about getting the right answer, not about feelings or ideologies.

In Florida, we will be educating our children, not indoctrinating them.

8:35 PM · Apr 20, 2022 from Florida, USA · Twitter for iPhone

The Teaching and Learning of Mathematics is NOT About Right Answers

When my students are learning mathematics, the answer is less critical.

It only tells me one thing.

How a student arrives at that answer tells me LOTS of things.

Story Problem Routine

Mr. Zak has 16 pieces of candy.

Ms. Claire has 9 pieces of candy.

Mr. Zak has 16 pieces of candy.
Ms. Claire has 9 pieces of candy.

How many more pieces of candy does Mr. Zak have than Ms. Claire?

A farm is selling eggs by the dozen.

You buy 7 dozen eggs.

A farm is selling eggs by the dozen.

You buy 7 dozen eggs.
How many eggs do you have?

Let’s Talk About Listening

“The best we can do as journalists is to try and listen to people. And one of the suggestions that I make - that will help unite us all - is that we take a more civil tone and to do that we need to try and listen to one another.”
-Dan Rather

Hearing is a physical process.

Listening is hearing and then actually reflecting upon what you're hearing.

Listening is a cognitive process, and it's the first step in understanding and learning.

How Do We Become Better Listeners?

-Ask questions you don’t know the answer to

-Get away from the board

-Allow for more student talk

-Provide pause

How Do We Become Better Listeners?

-Ask questions you don't know the answer to

-Get away from the board

-Allow for more student talk

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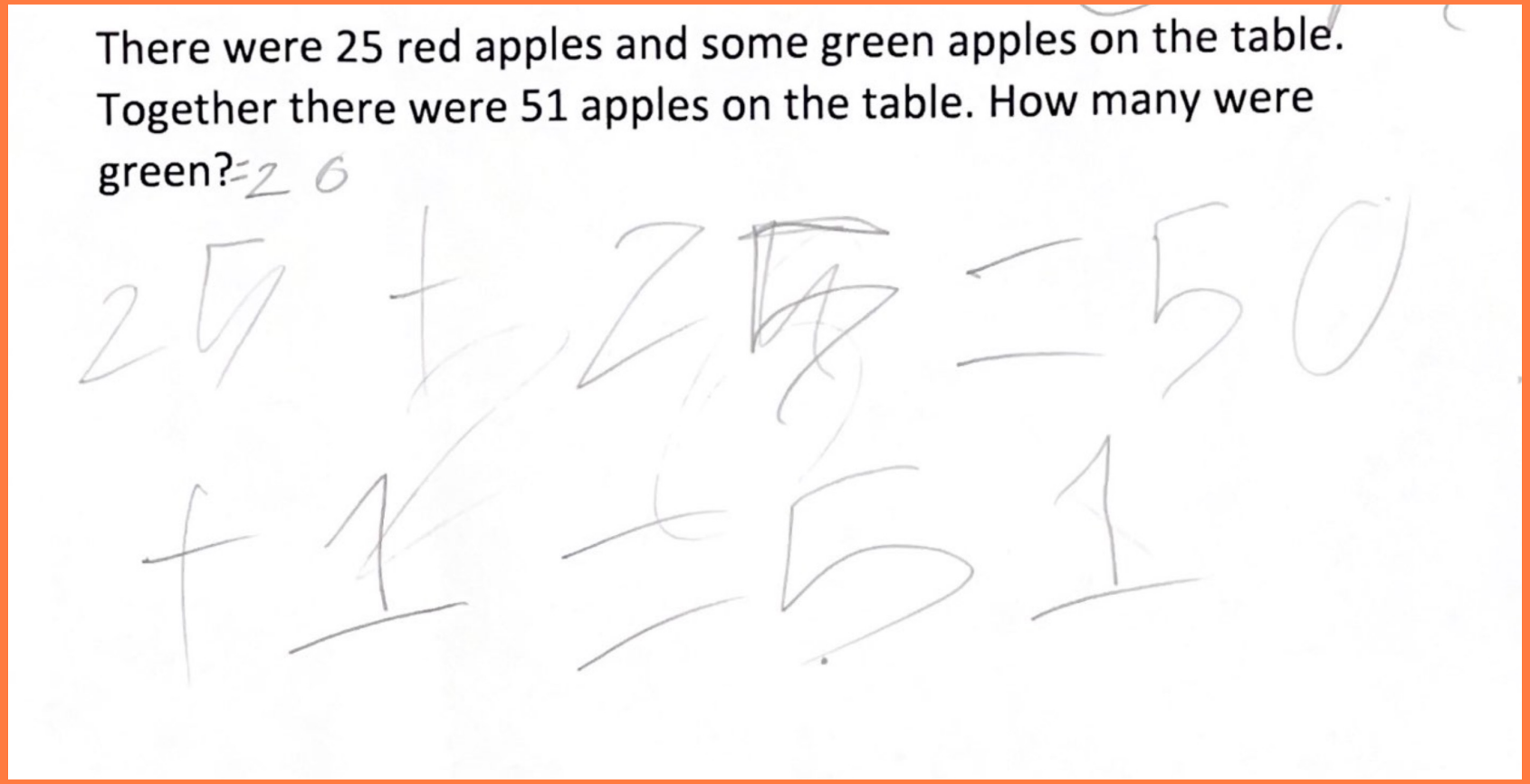
Landon

There were 25 red apples and some green apples on the table. Together there were 51 apples on the table. How many were green?

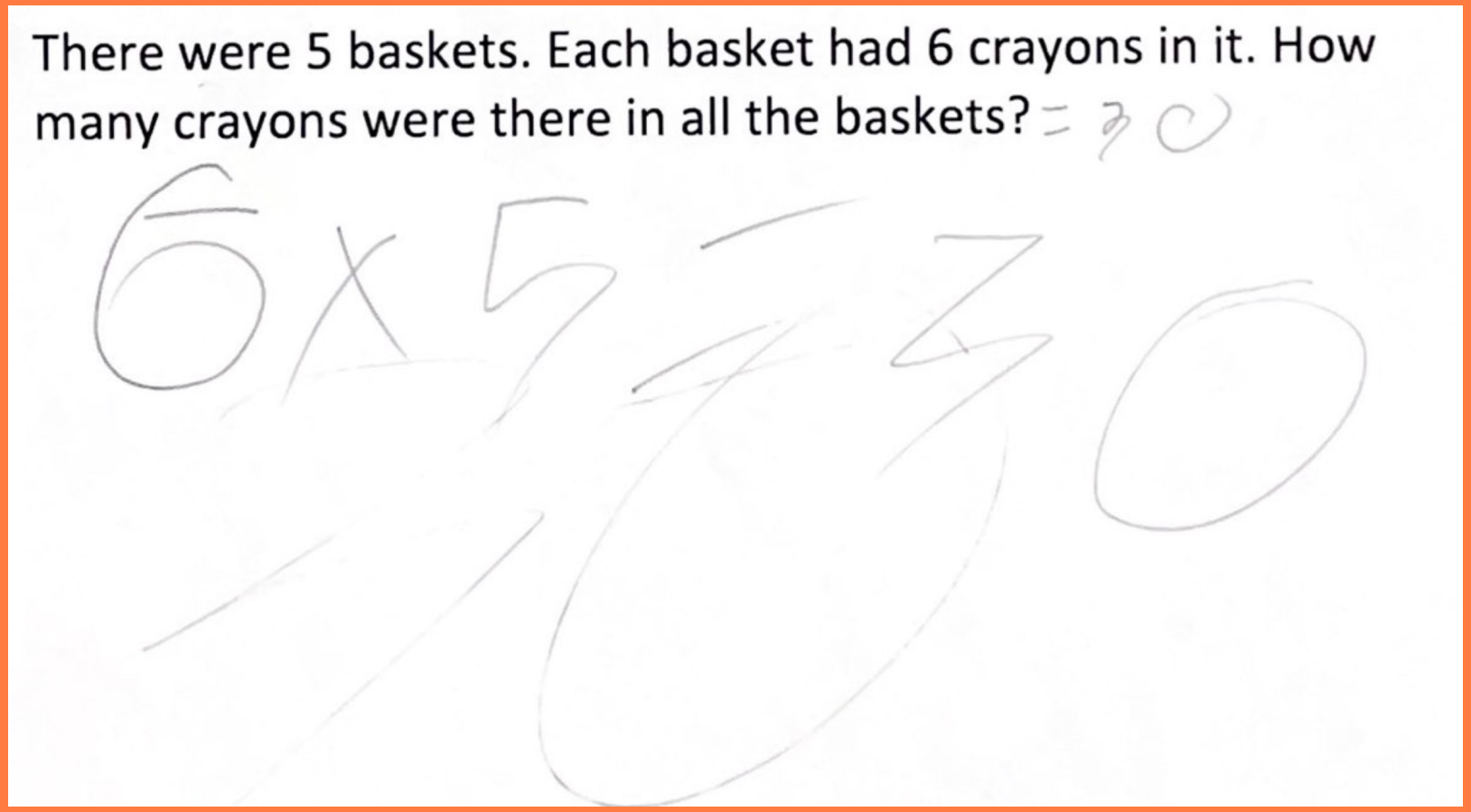
Landon


There were 25 red apples and some green apples on the table. Together there were 51 apples on the table. How many were green?=26
25+26=50
+1=51

Landon

There were 5 baskets. Each basket had 6 crayons in it. How many crayons were there in all the baskets?

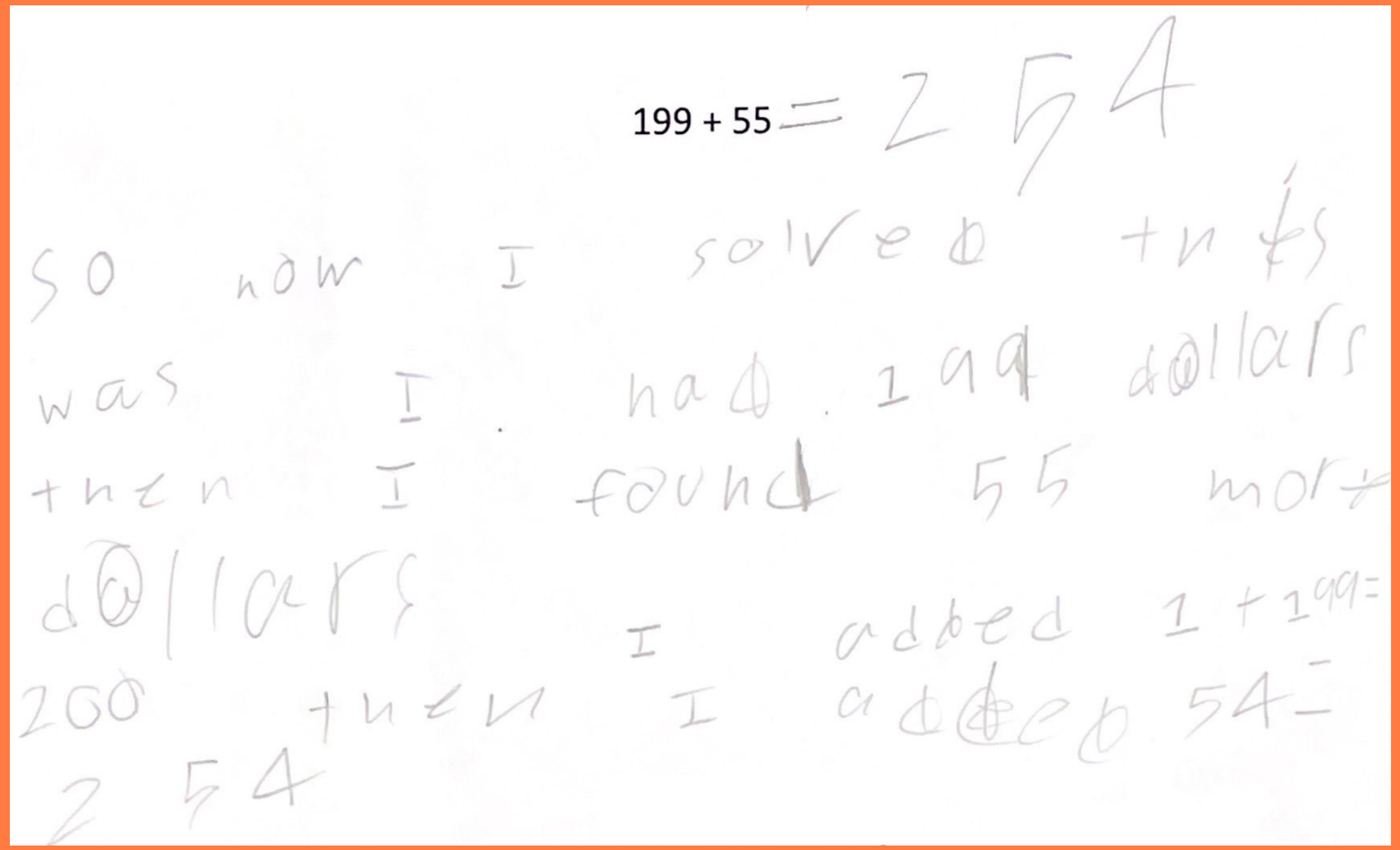
Landon


There were 5 baskets. Each basket had 6 crayons in it. How many crayons were there in all the baskets?
6 x 5 = 30

Landon

199 + 55

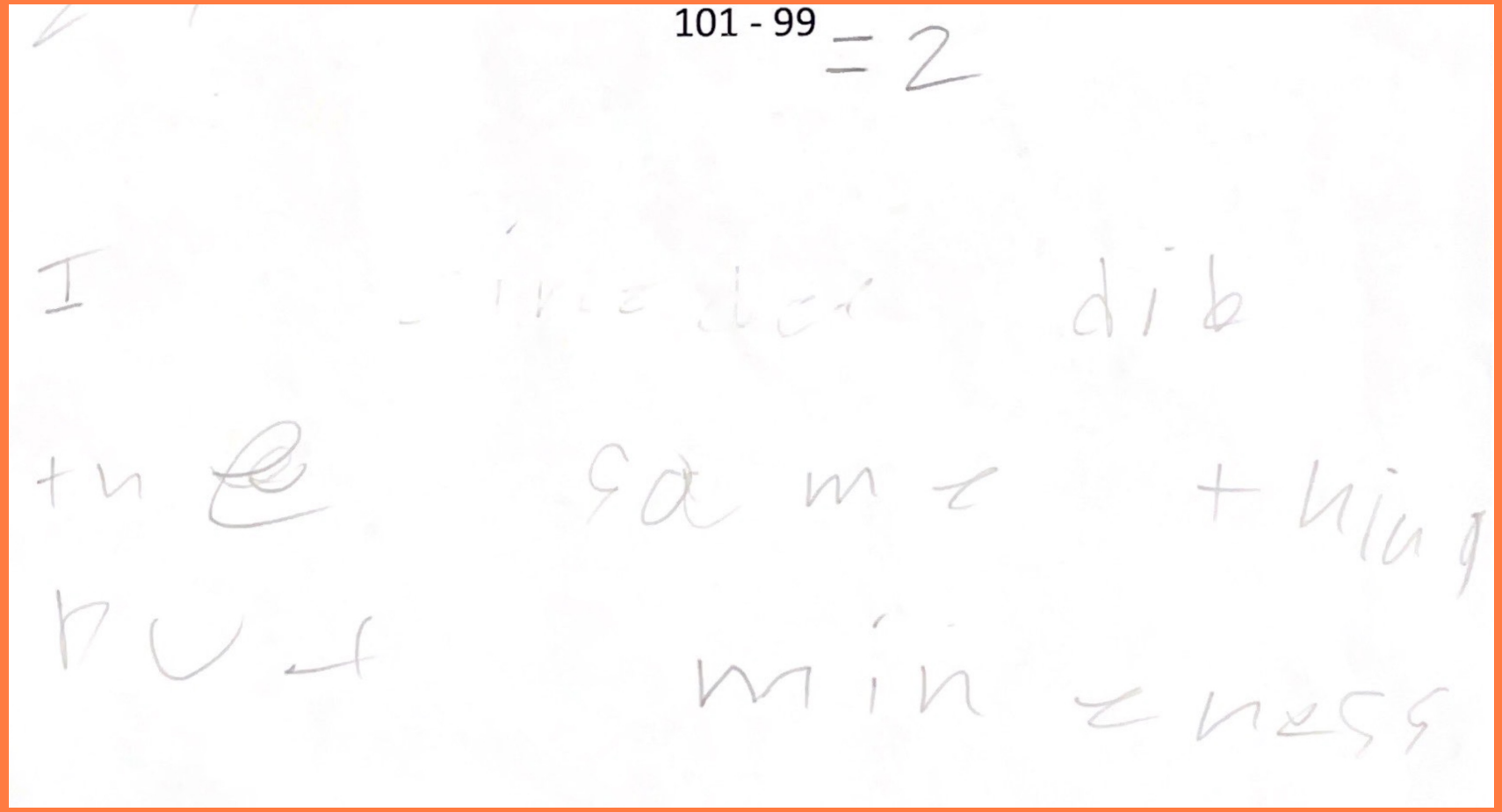
Landon


199 + 55 = 254
so now I solved this
was I had 199 dollars
then I found 55 more
dollars I added 1 + 199 =
200 then I added 54 =
254

Landon

101 - 99

Landon



"I did the same thing but minuses"

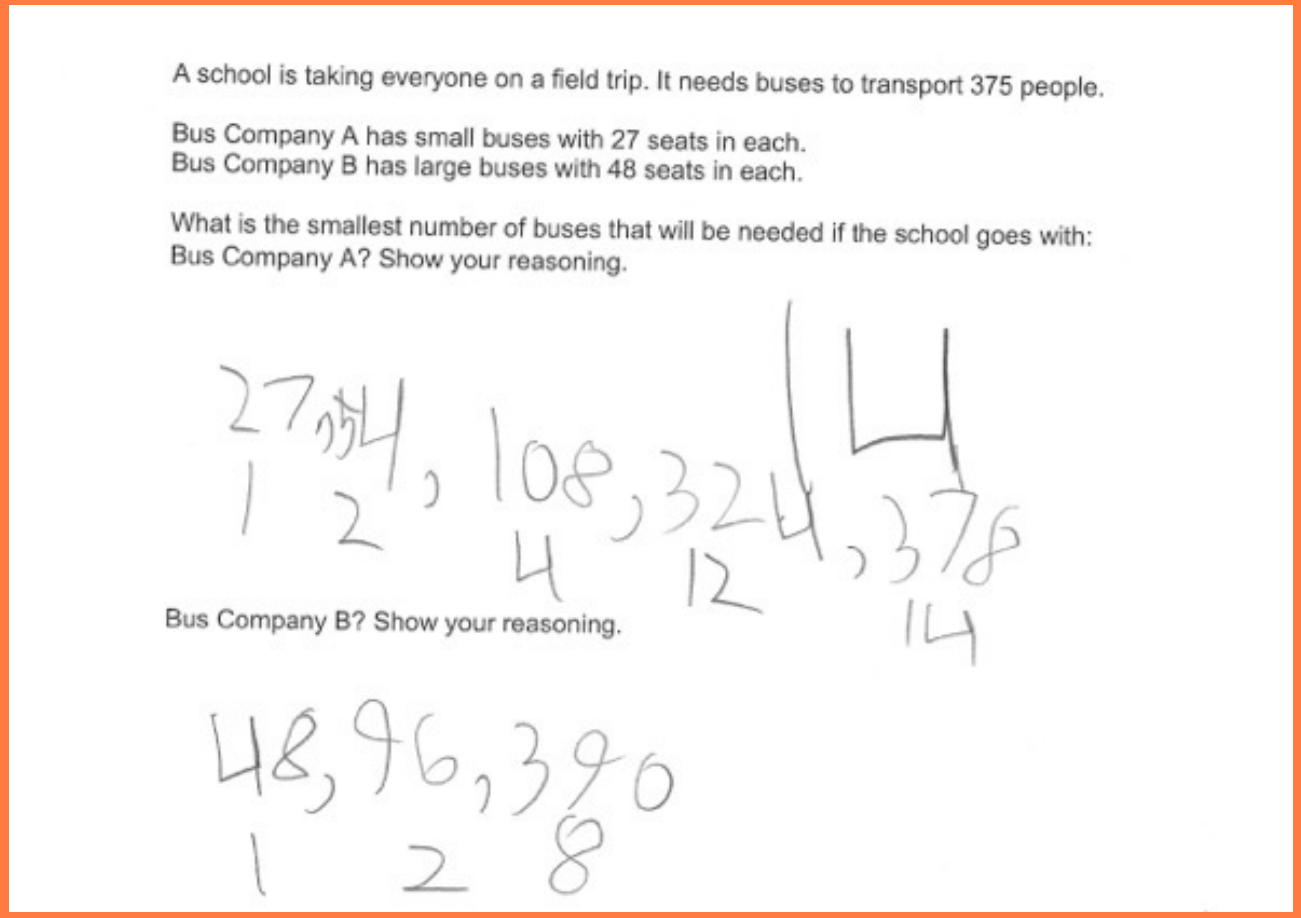
Gavin

A school is taking everyone on a field trip. It needs buses to transport 375 people.

Bus Company A has small buses with 27 seats in each.
Bus Company B has large buses with 48 seats in each.

What is the smallest number of buses that will be needed if the school goes with:
Bus Company A? Bus Company B? Show your reasoning.

Gavin



A school is taking everyone on a field trip. It needs buses to transport 375 people.

Bus Company A has small buses with 27 seats in each.
Bus Company B has large buses with 48 seats in each.

What is the smallest number of buses that will be needed if the school goes with:
Bus Company A? Show your reasoning.

27, 54, 108, 324, 378

14

Bus Company B? Show your reasoning.

48, 96, 390

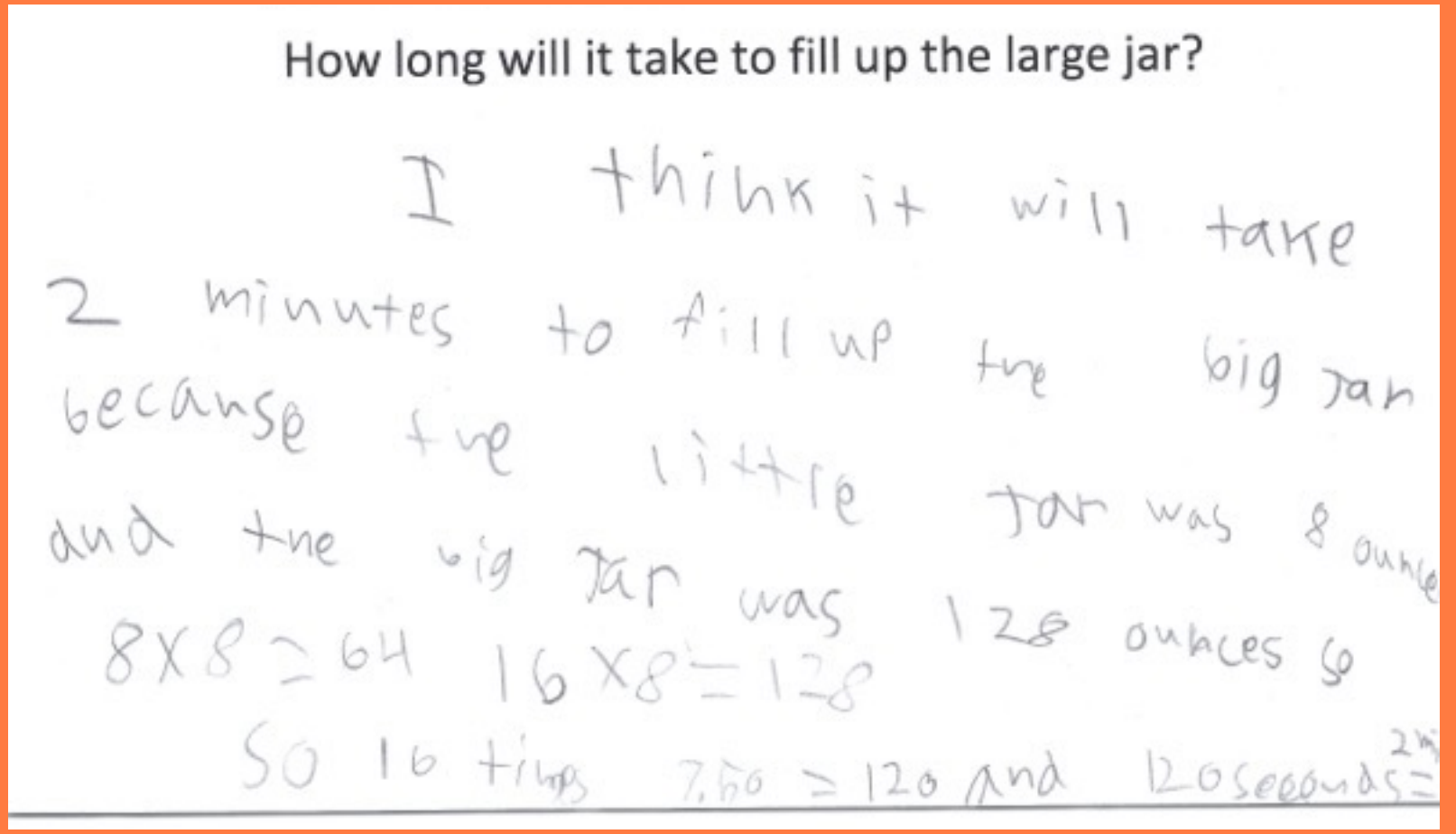
8

Illustrative Math

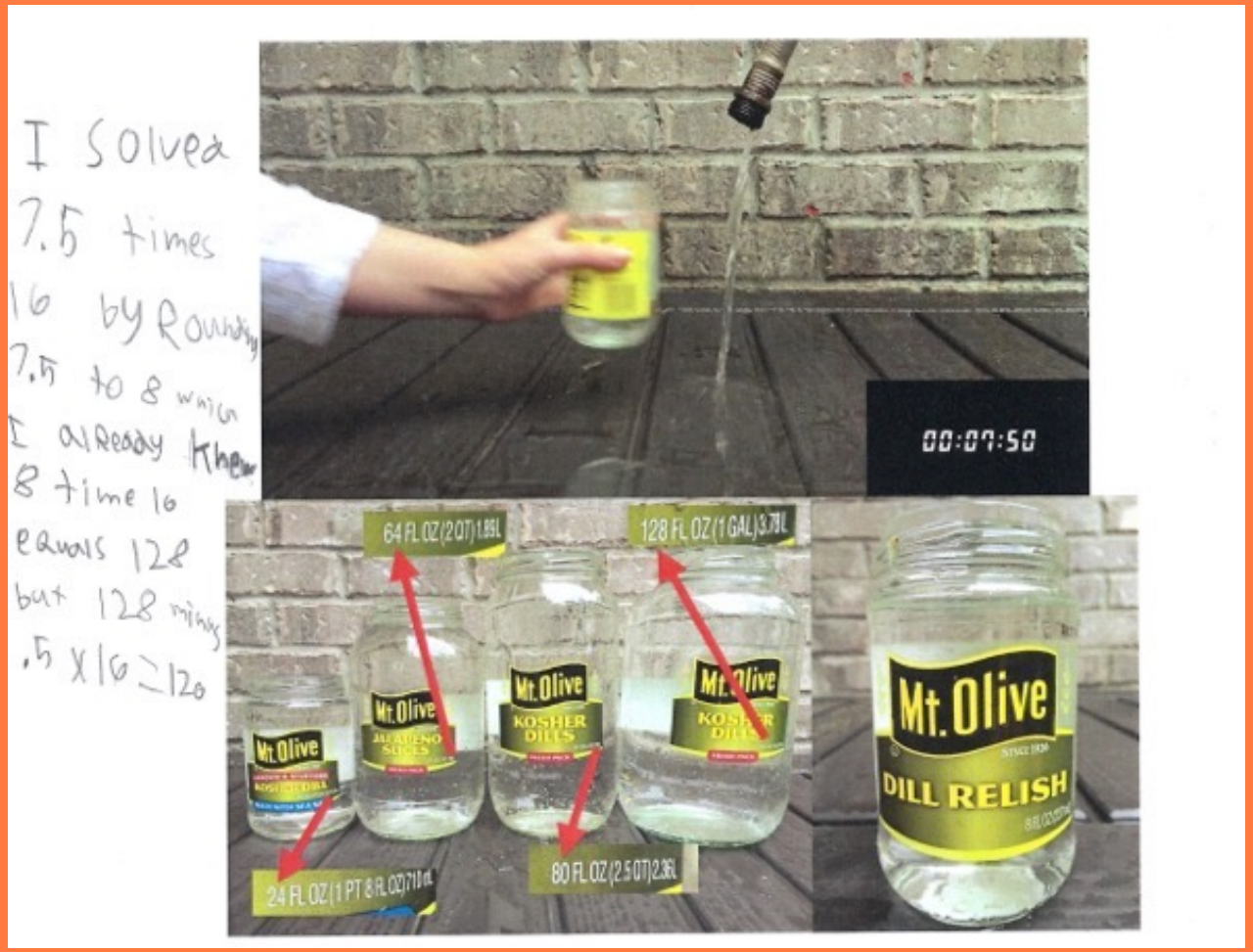
Gavin

How long to fill up the biggest pickle jar?

Gavin

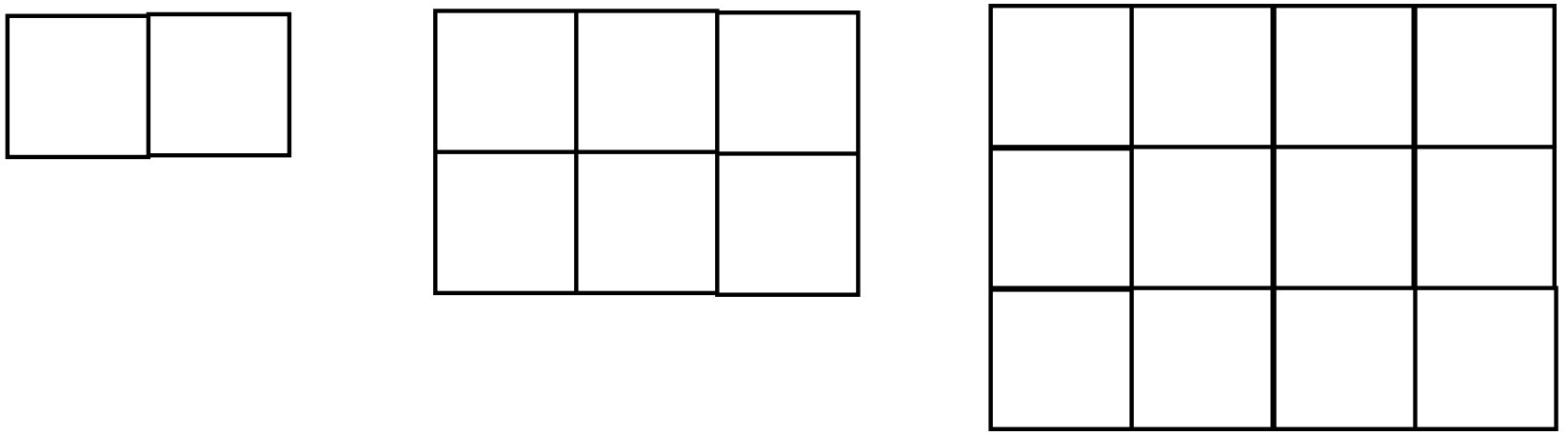

How long will it take to fill up the large jar?
I think it will take
2 minutes to fill up the big jar
because the little jar was 8 ounce
and the big jar was 128 ounces so
8 X 8 = 64 16 X 8 = 128
so 16 times 7.50 = 120 and 120 seconds =

Gavin


I solved
7.5 times
16 by rounding
7.5 to 8 which
I already knew
8 time 16
equals 128
but 128 minus
.5 x 16 = 120
00:07:50
64 FL OZ (2 QT) 1.89L
128 FL OZ (1 GAL) 3.78L
24 FL OZ (1 PT 8 FL OZ) 710 mL
80 FL OZ (2.5 QT) 2.36L
Mt. Olive
KOSHER DILLS
JALAPEÑO SLICES
DILL RELISH

G7 and G8 problem

Look at the following growing pattern below. What do you notice? What do you wonder?



Developing Mathematical Ideas

G7 and G8 problem

Look at this table. What do you notice? What do you wonder?

Height	Number of Tiles
1	2
2	6
3	12
4	?

Developing Mathematical Ideas

G7 and G8 problem

Continue the table up to rectangles with a height of 10.

What observations do you notice about the values in the table? How is it growing?

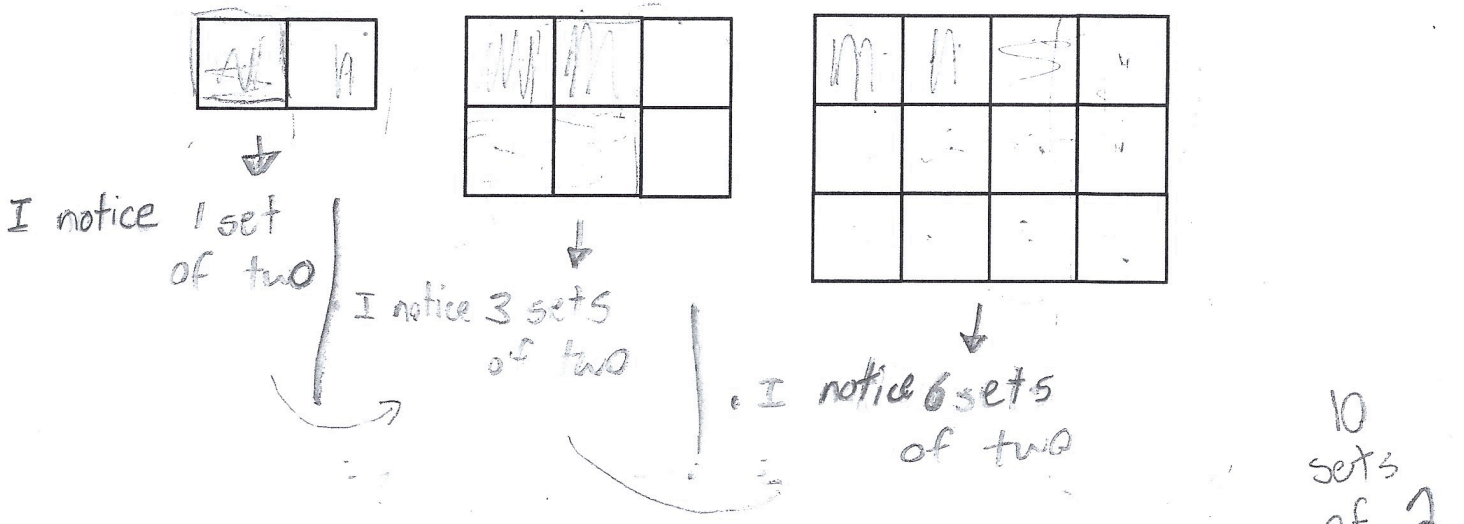
What would a graph for this table look like? Would it be linear? How do you know?

Is there a rule for this pattern? Can you write it out in words? Or as an equation?

Developing Mathematical Ideas

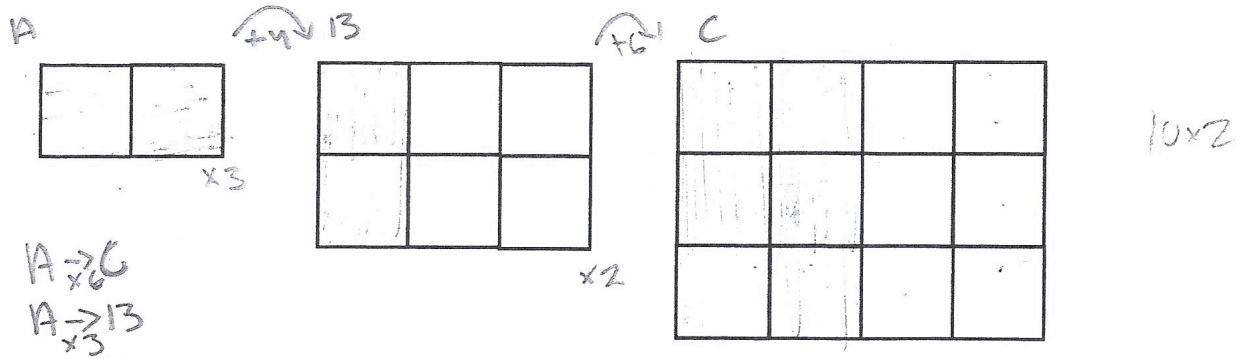
Joy

Look at the following growing pattern below. What do you notice? What do you wonder?



Abby

Look at the following growing pattern below. What do you notice? What do you wonder?



Joy

Look at this table. What do you notice? What do you wonder?

Height	Number of Tiles
1	2
2	6
3	12
4	?

4×5=(20

- I notice there is a pattern
- I notice the pattern is the height times the number below it is the number of tiles

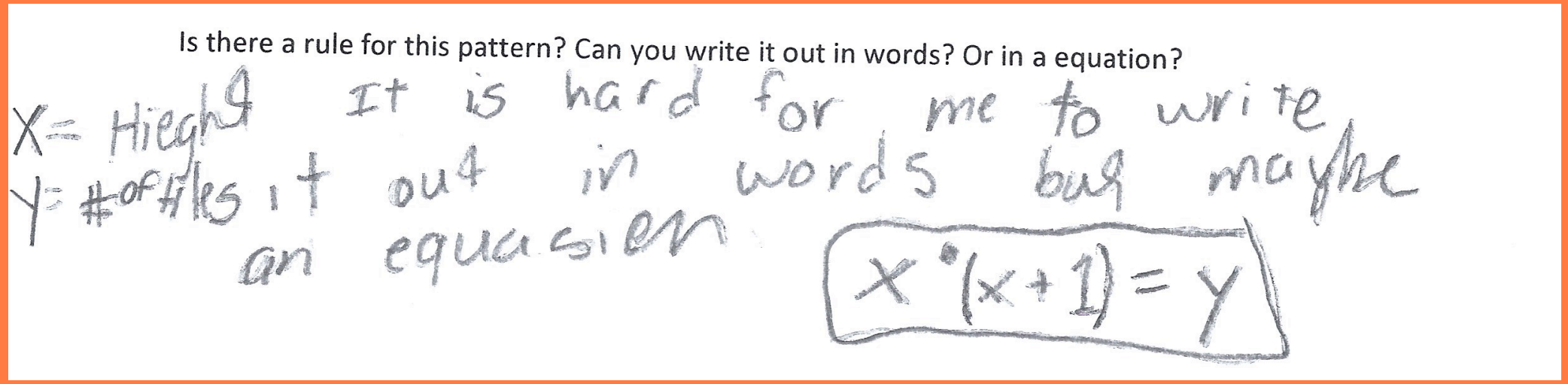
- I wonder if the "?" is 20?
- I wonder what we are doing with tiles?

Abby

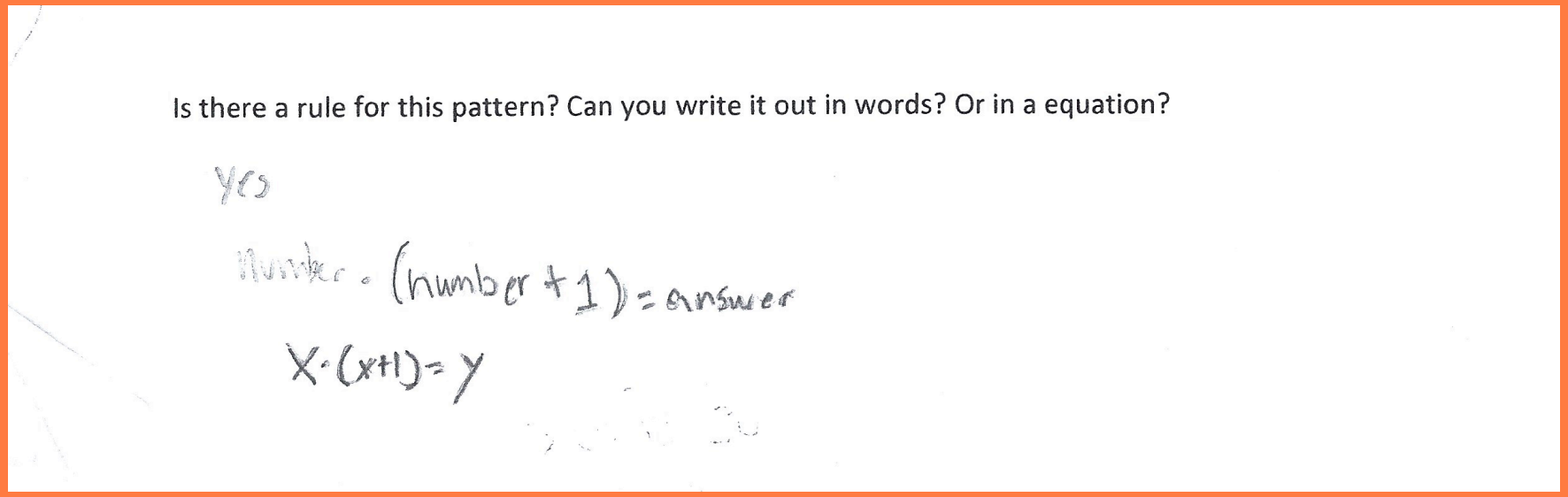
Look at this table. What do you notice? What do you wonder?

Height	Number of Tiles
1	2
2	6
3	12
4	? 20

Joy


Is there a rule for this pattern? Can you write it out in words? Or in a equation?
X= Hieght
Y= #of tiles
It is hard for me to write it out in words but maybe an equasion
x•(x+1)=y

Abby



Is there a rule for this pattern? Can you write it out in words? Or in a equation?

yes

Number · (number + 1) = answer

X · (x+1) = y

Christine

Christine

How do you feel during math class?

How do you like to show what you know and understand?

How can your teachers better understand what you know?

THANK YOU!

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zakchamp.com | @zakchamp

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