The Teaching and Learning of Mathematics is About Ideas

ZACHARY CHAMPAGNE

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

The teaching and learning of mathematics is more about ideas than it is about answers.

BE PATIENT
LISTEN
FORGIVE

Be Patient

The teaching and learning of mathematics is a long game.

Go Slow To Go Fast

Listen

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

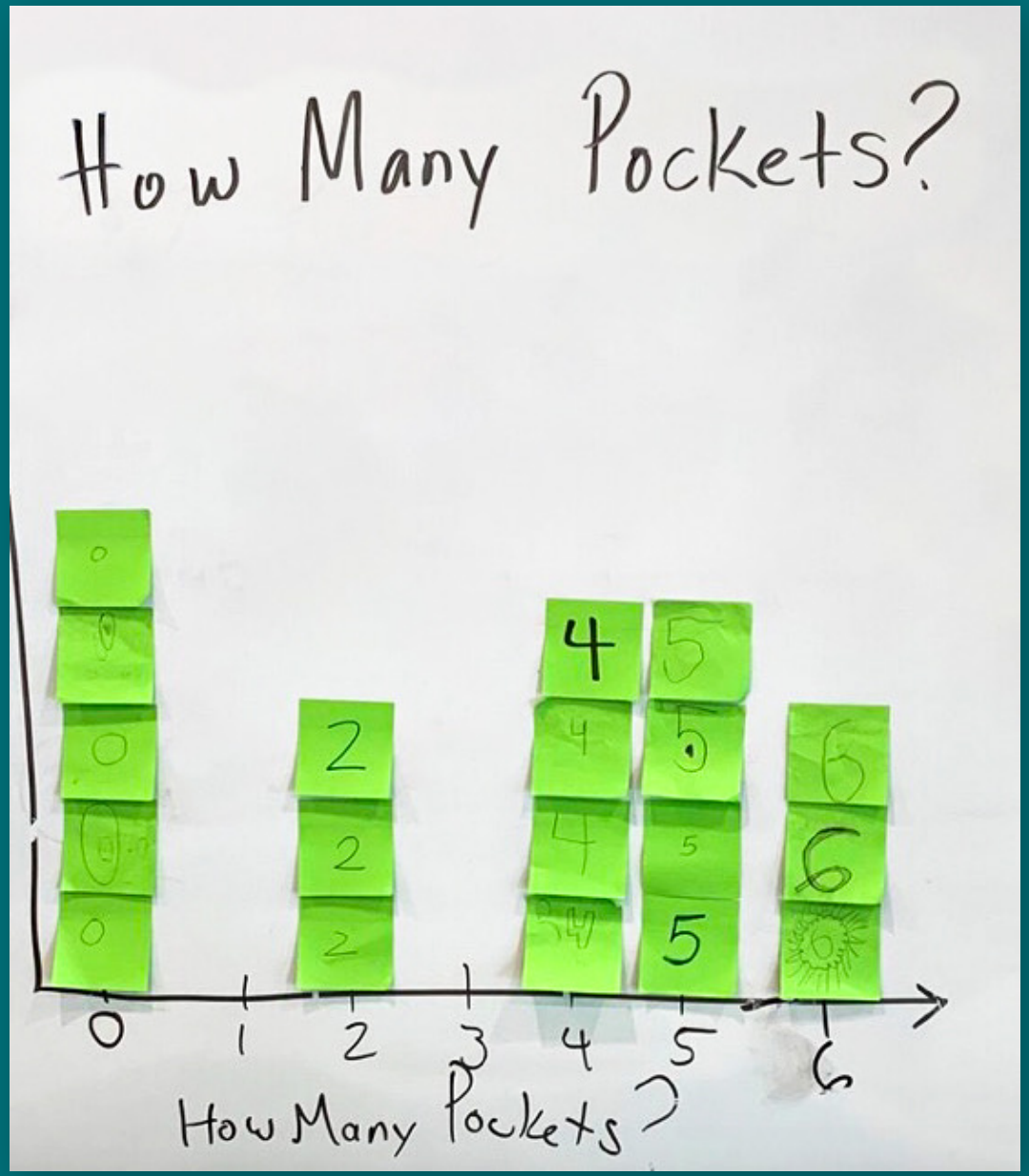
-Provide pause

Writing Instruction

It's about the writer, not the piece of writing.

It's about the mathematician, not the math problem.

Forgive


How Many Pockets?
0
2
4
5
6
0 1 2 3 4 5 6
How Many Pockets?

KEIRA: I don’t want to do this today.

ME: Well, this is what we are doing.

KEIRA: Okay {Begrudgingly goes back to her seat}

A few minutes later…

KEIRA: I don’t want to do this today.

What would you say and/or do?

KEIRA: I don’t want to do this today.

ME: Well, this is what we are doing.

KEIRA: Okay {Begrudgingly goes back to her seat}

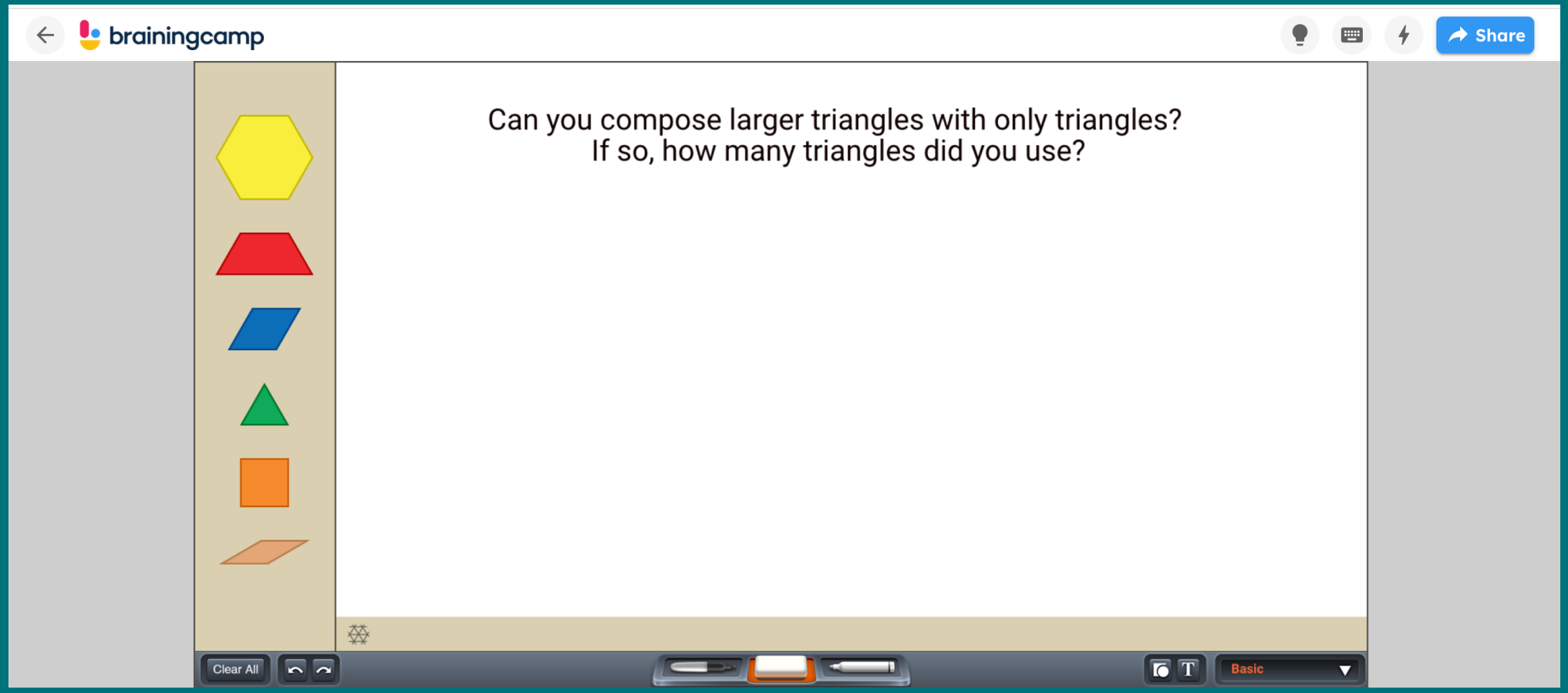
A few minutes later…

KEIRA: I don’t want to do this today.

ME: Keira, you told me that, but this is what we are doing. Can you please get to work?

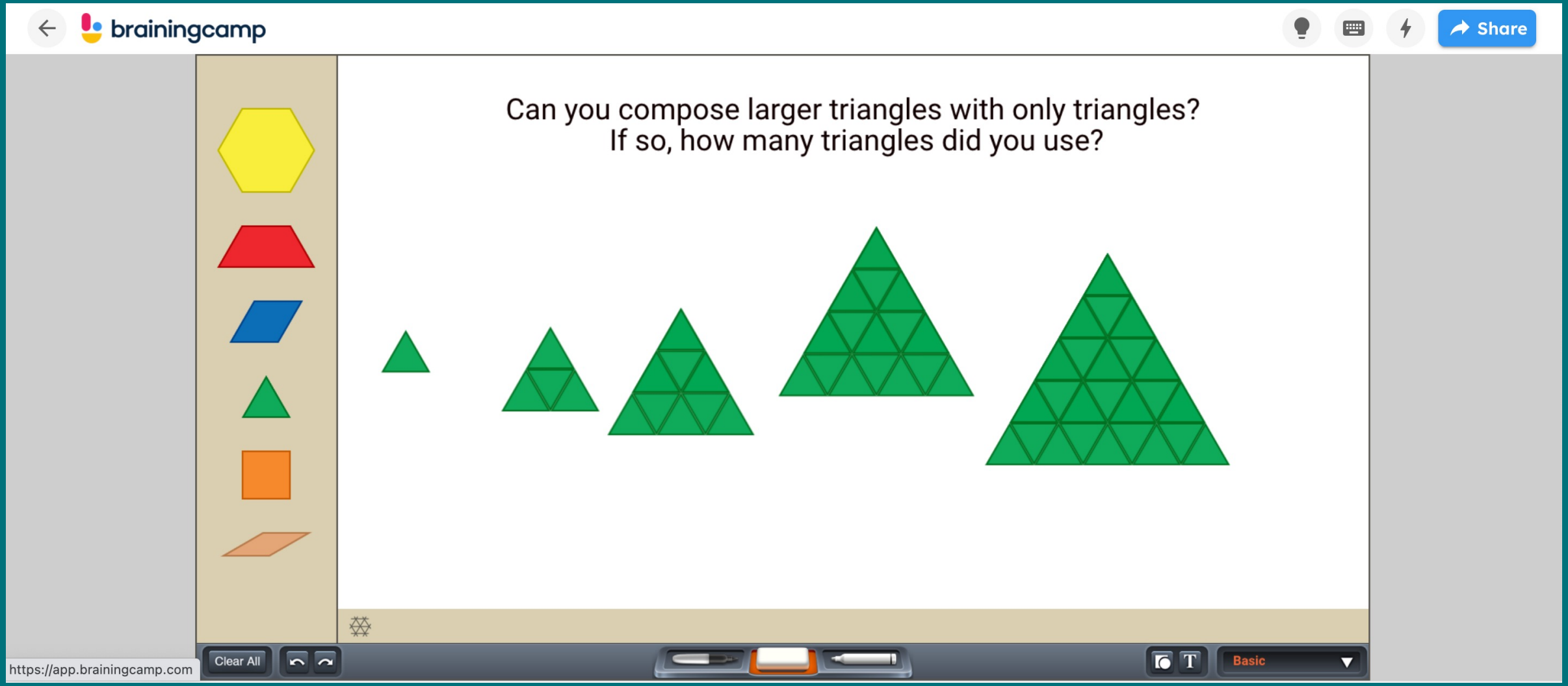
The next day...

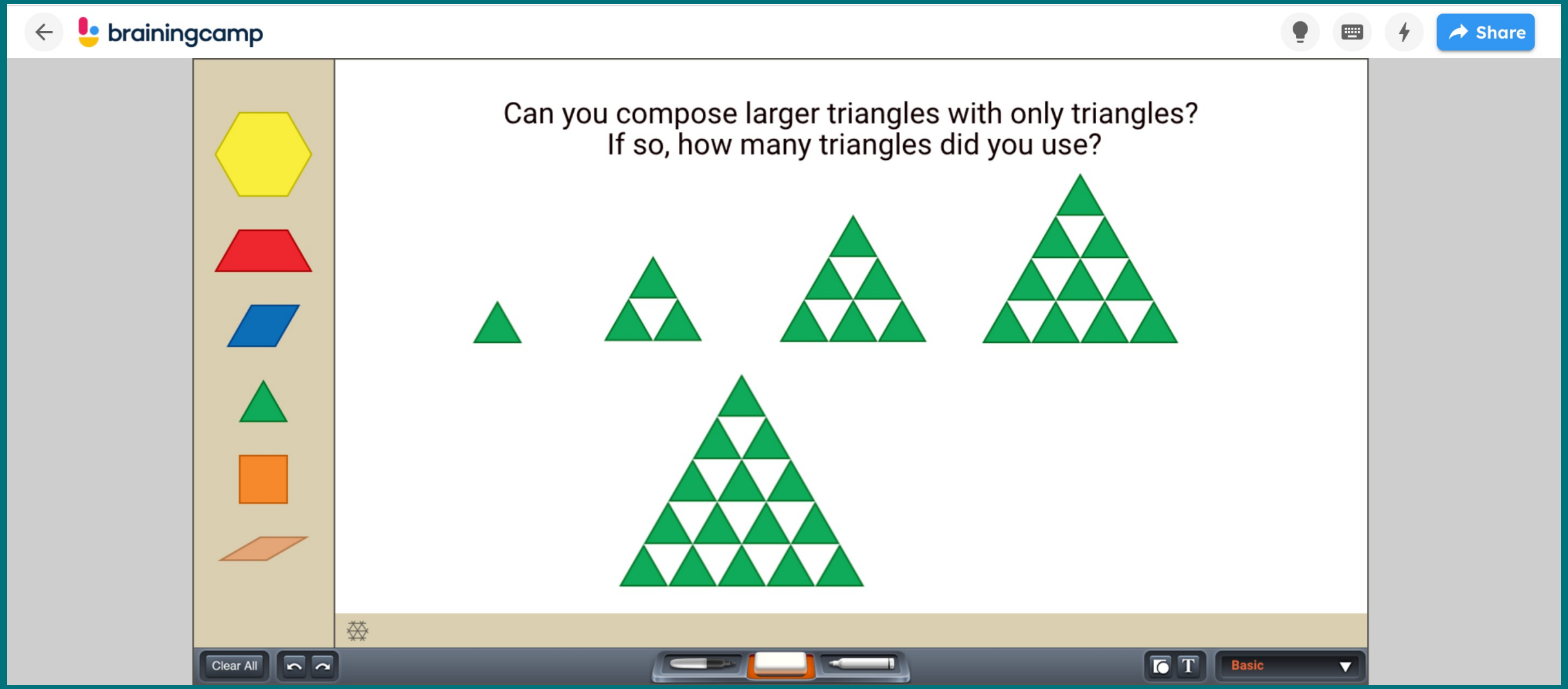
Let's Play with Some Math



Can you compose larger triangles with only triangles?

How many triangles did you use?


brainingcamp
Share
Can you compose larger triangles with only triangles?
If so, how many triangles did you use?
Clear All
T
Basic
https://app.brainingcamp.com

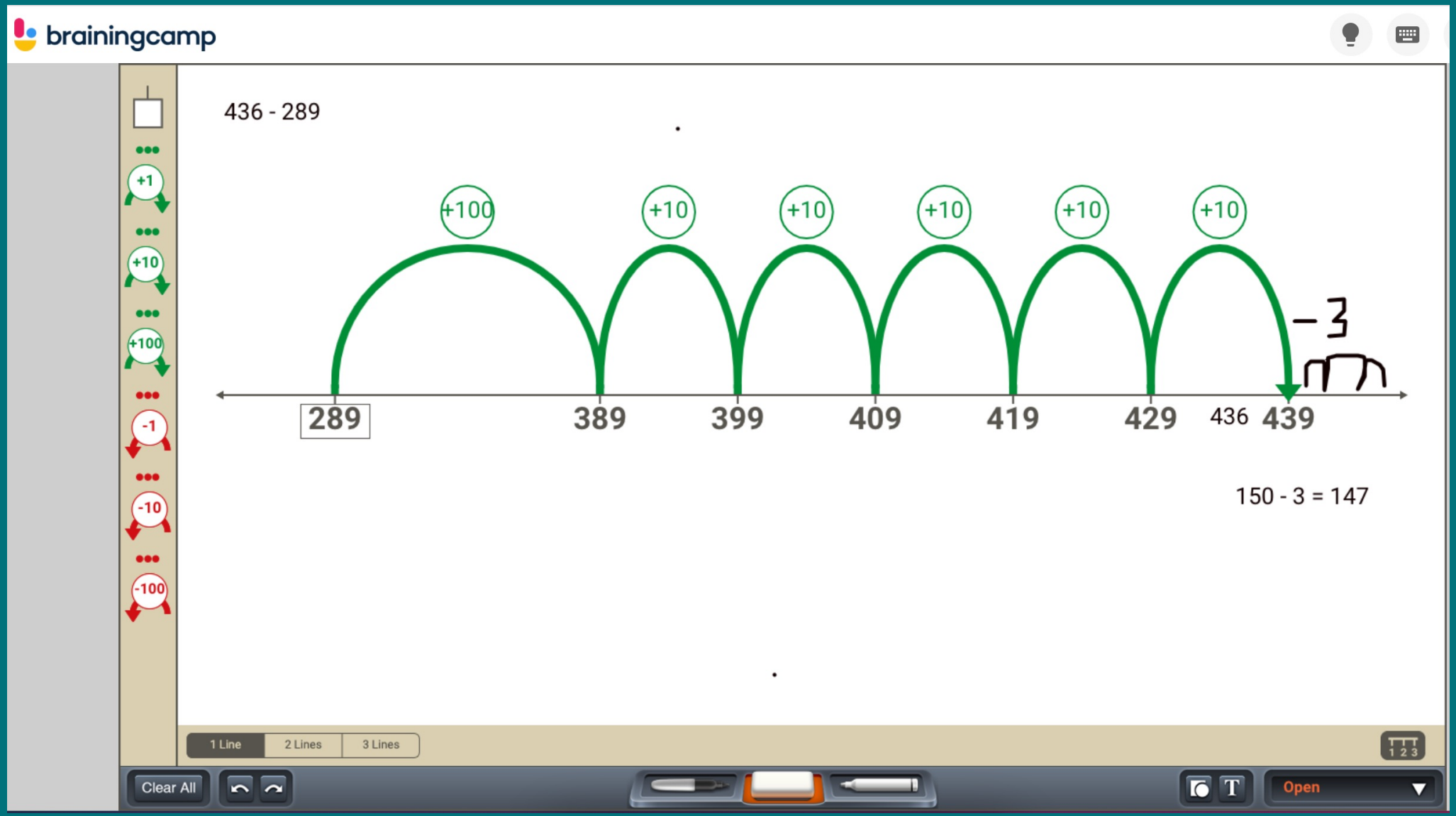

brainingcamp
Share
Can you compose larger triangles with only triangles?
If so, how many triangles did you use?
Clear All
Basic

Can you compose larger rhombi with only rhombi?

How many rhombi did you use?

Consider this problem

Anderson loves to play video games. In their favorite game, they need 436 gems to get a new skin for their character. Anderson currently has 289 gems. How many more gems do they need to have enough to buy the new skin?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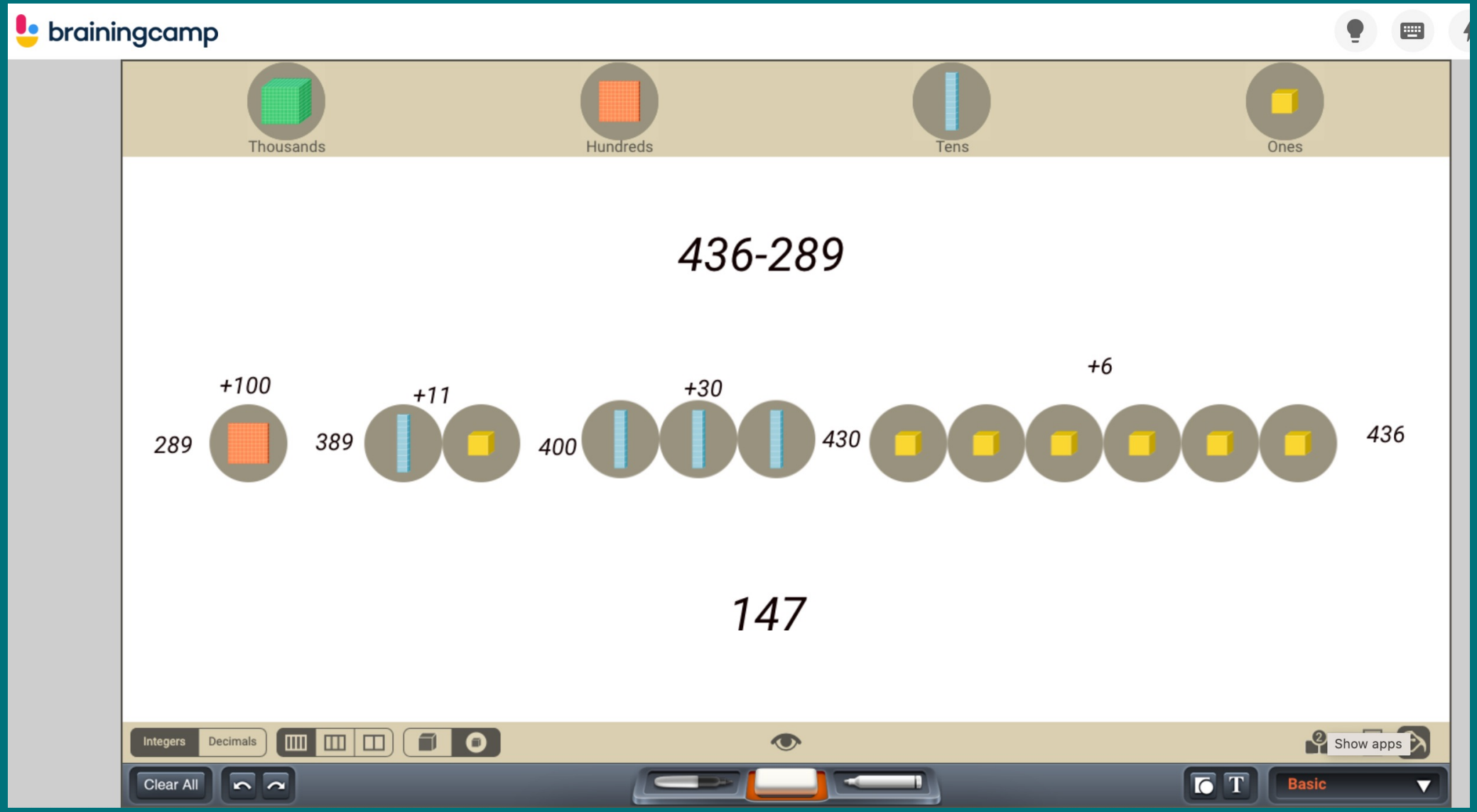
436 - 289
+1
+10
+100
-1
-10
-100
+100
+10
+10
+10
+10
+10
289
389
399
409
419
429
436
439
-3
150 - 3 = 147
1 Line
2 Lines
3 Lines
Clear All
Open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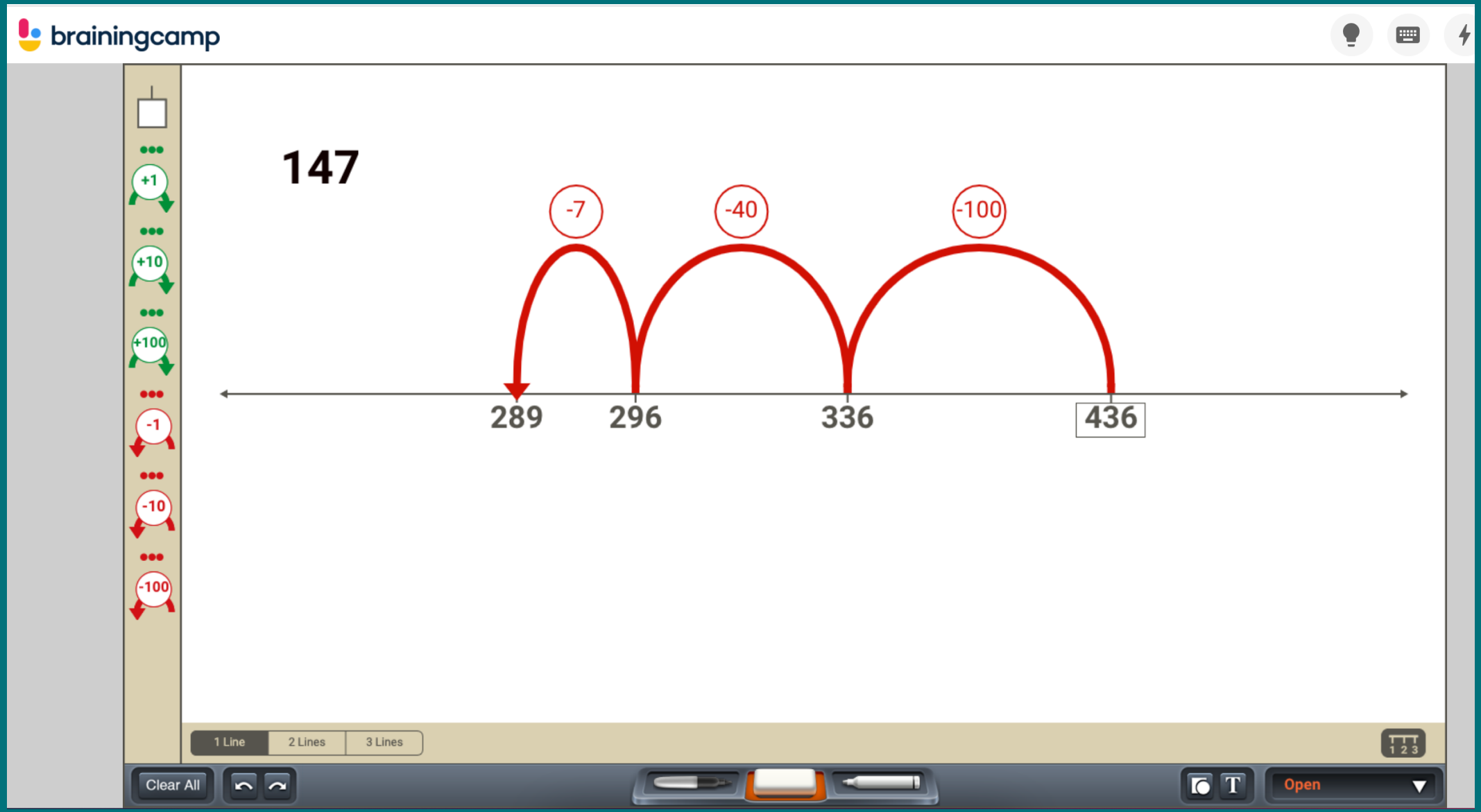
Thousands
Hundreds
Tens
Ones
436-289
+100
+11
+30
+6
289
389
400
430
436
147
Integers
Decimals
Show apps
Clear All
Basic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147
+1
+10
+100
-1
-10
-100
-7
-40
-100
289
296
336
436
1 Line
2 Lines
3 Lines
Clear All
Open

What do you notice?
What do you wonder?

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Share
1 2 3 4 5 6 7 8 9 10
11 12 13 14 15 16 17 18 19 20
21 22 23 24 25 26 27 28 29 30
31 32 33 34 35 36 37 38 39 40
41 42 43 44 45 46 47 48 49 50
51 52 53 54 55 56 57 58 59 60
61 62 63 64 65 66 67 68 69 70
71 72 73 74 75 76 77 78 79 80
81 82 83 84 85 86 87 88 89 90
91 92 93 94 95 96 97 98 99 100
4
100
120
Clear All
Multiples

brainingcamp
Share
1 2 3 4 5 6 7 8 9 10
11 12 13 14 15 16 17 18 19 20
21 22 23 24 25 26 27 28 29 30
31 32 33 34 35 36 37 38 39 40
41 42 43 44 45 46 47 48 49 50
51 52 53 54 55 56 57 58 59 60
61 62 63 64 65 66 67 68 69 70
71 72 73 74 75 76 77 78 79 80
81 82 83 84 85 86 87 88 89 90
91 92 93 94 95 96 97 98 99 100
4
6
100
120
Clear All
Multiples

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

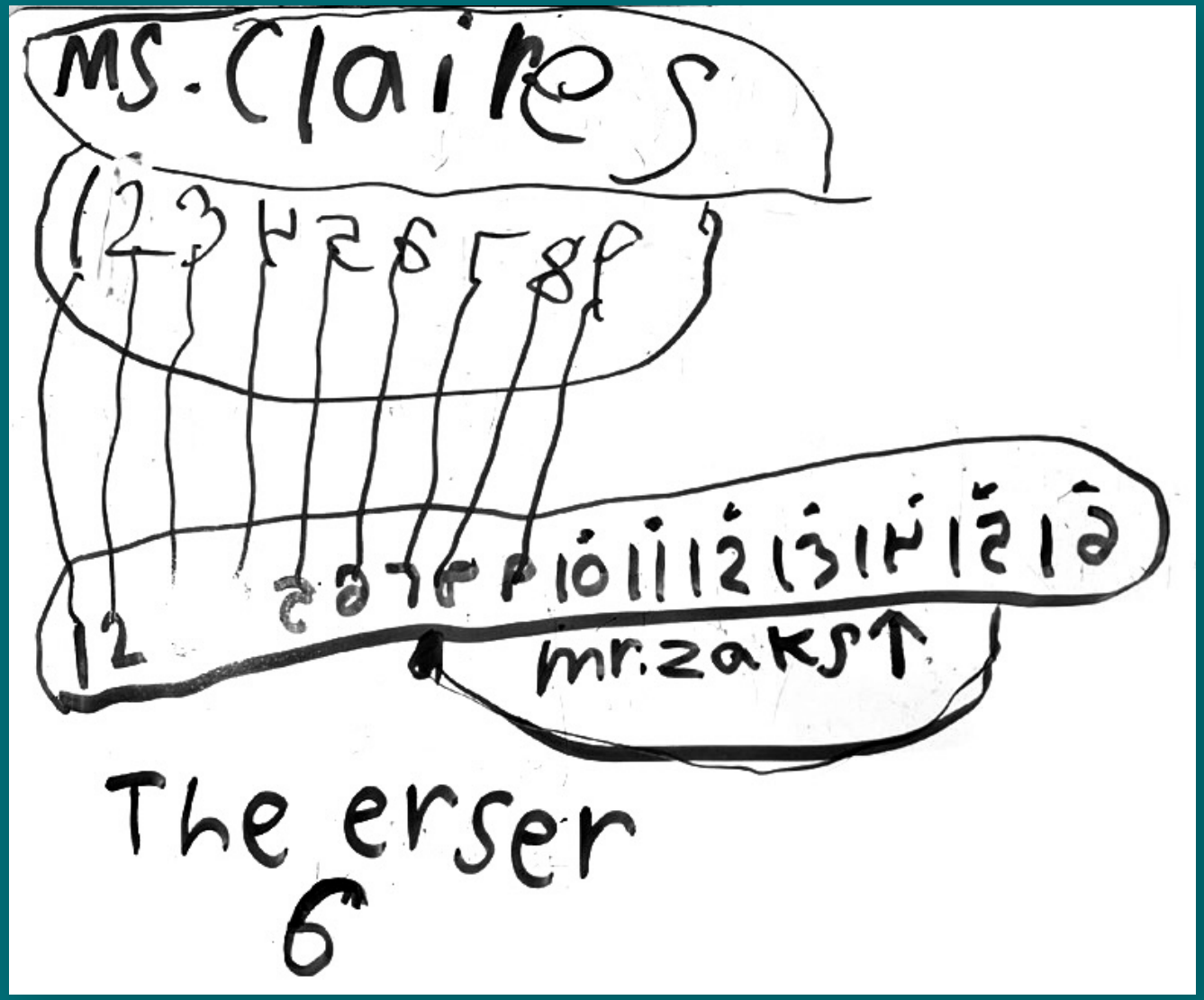
Story Problem Routine

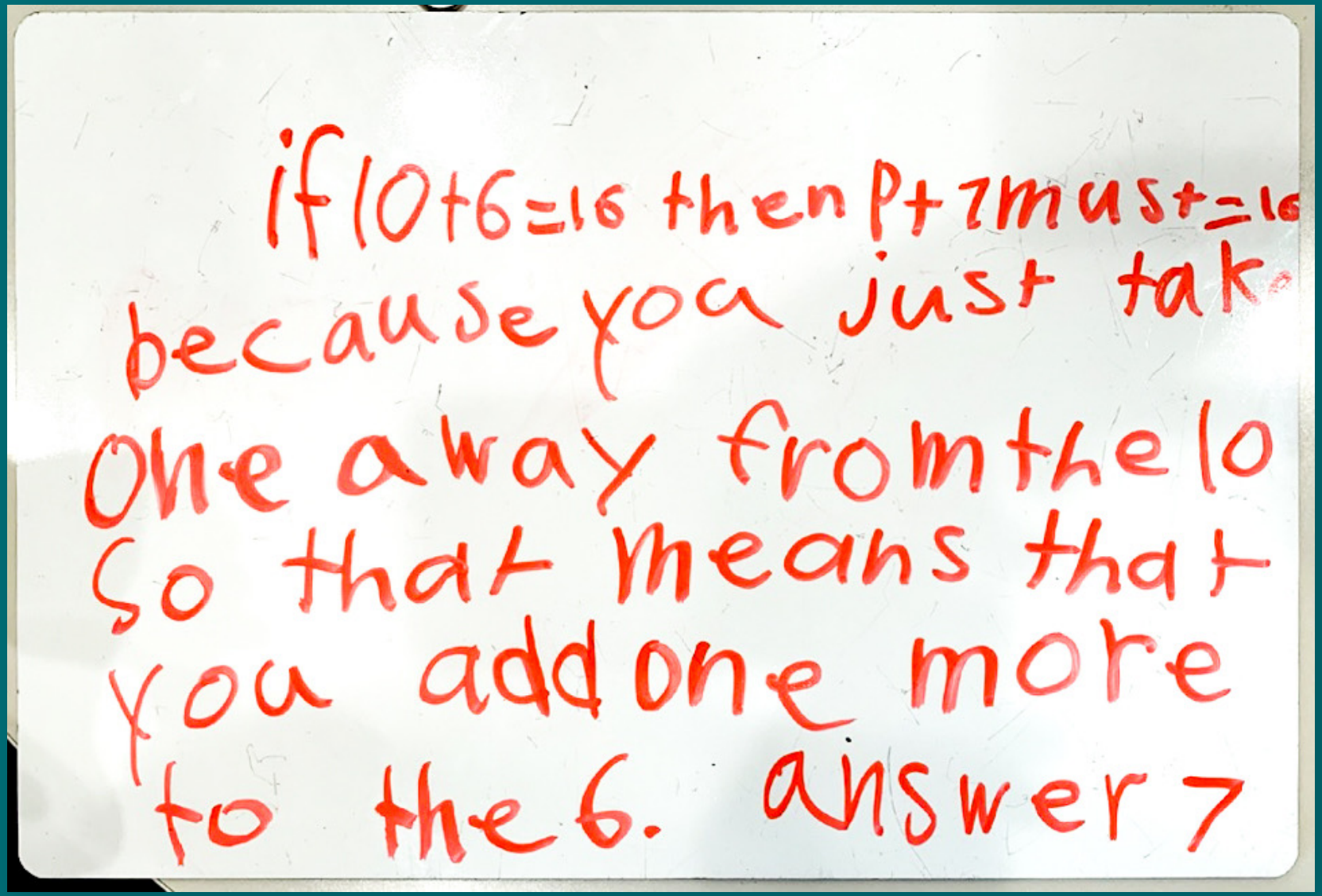
Mr. Zak has 16 pieces of candy.

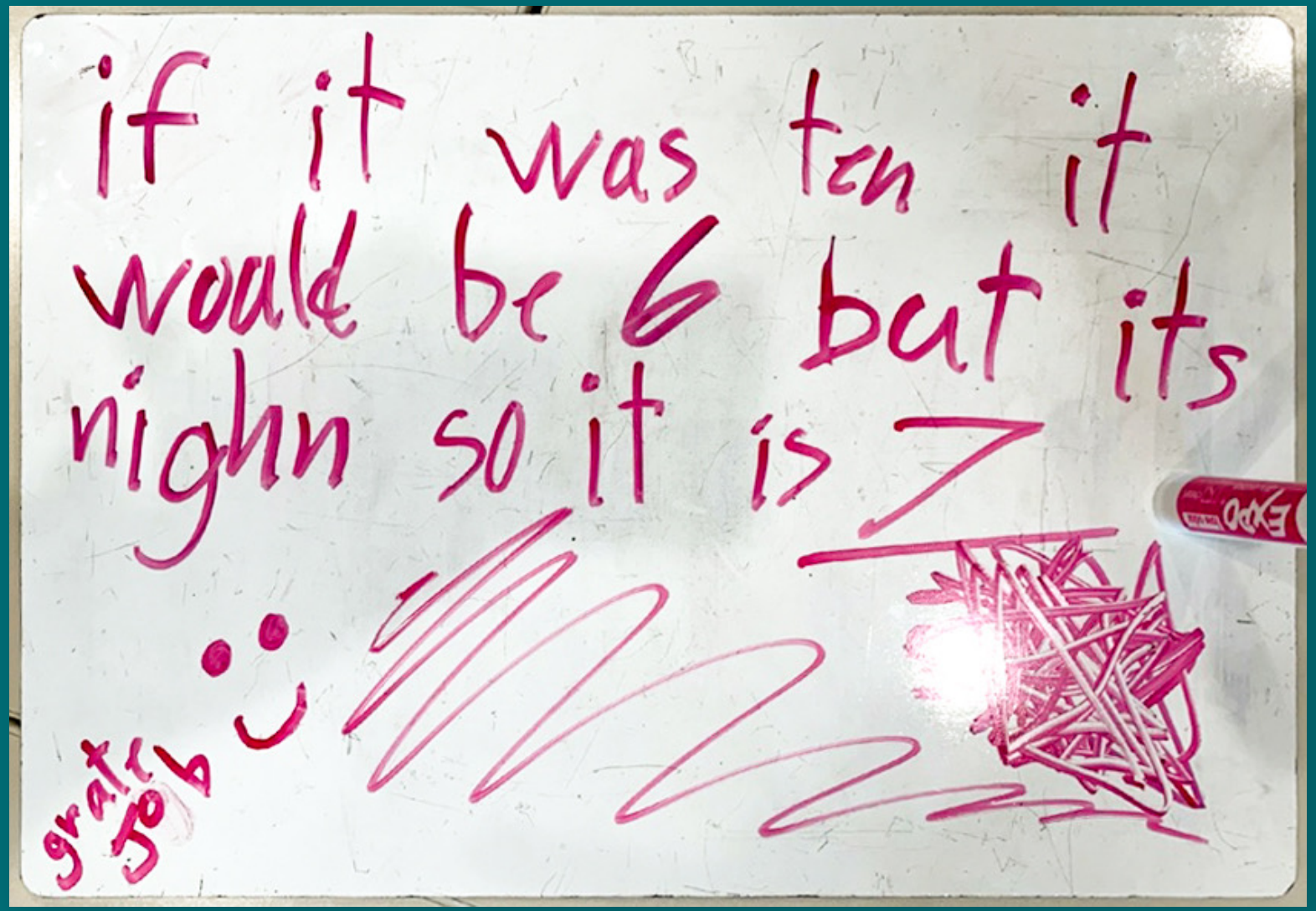
Ms. Claire has 9 pieces of candy.

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?


MS. Claire S
mr. zaks
The erser


if 10+6=16 then P+7 must=16
because you just tak
one away from the 10
so that means that
you add one more
to the 6. answer 7

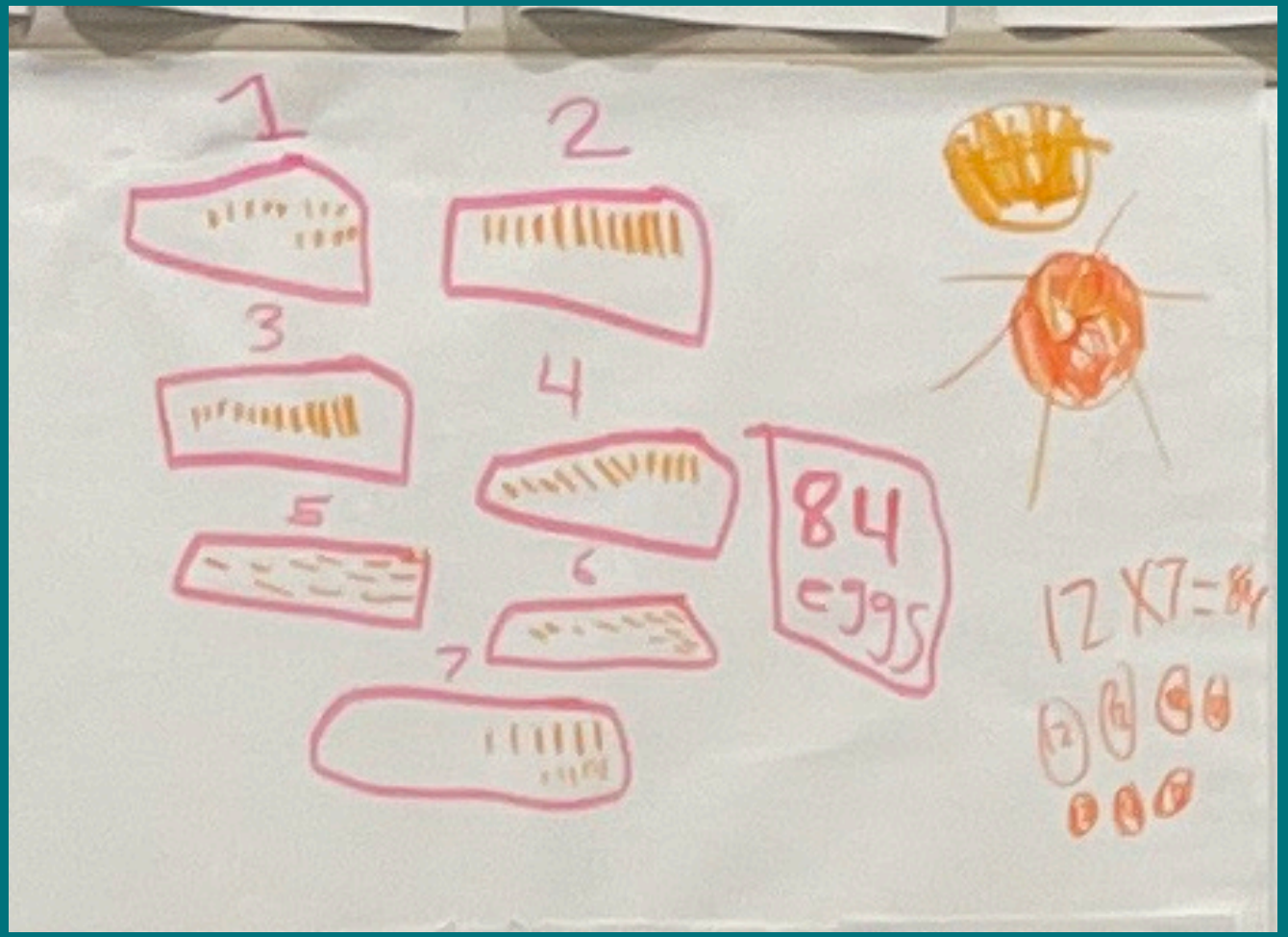

if it was ten it
would be 6 but its
nighn so it is 7
great job

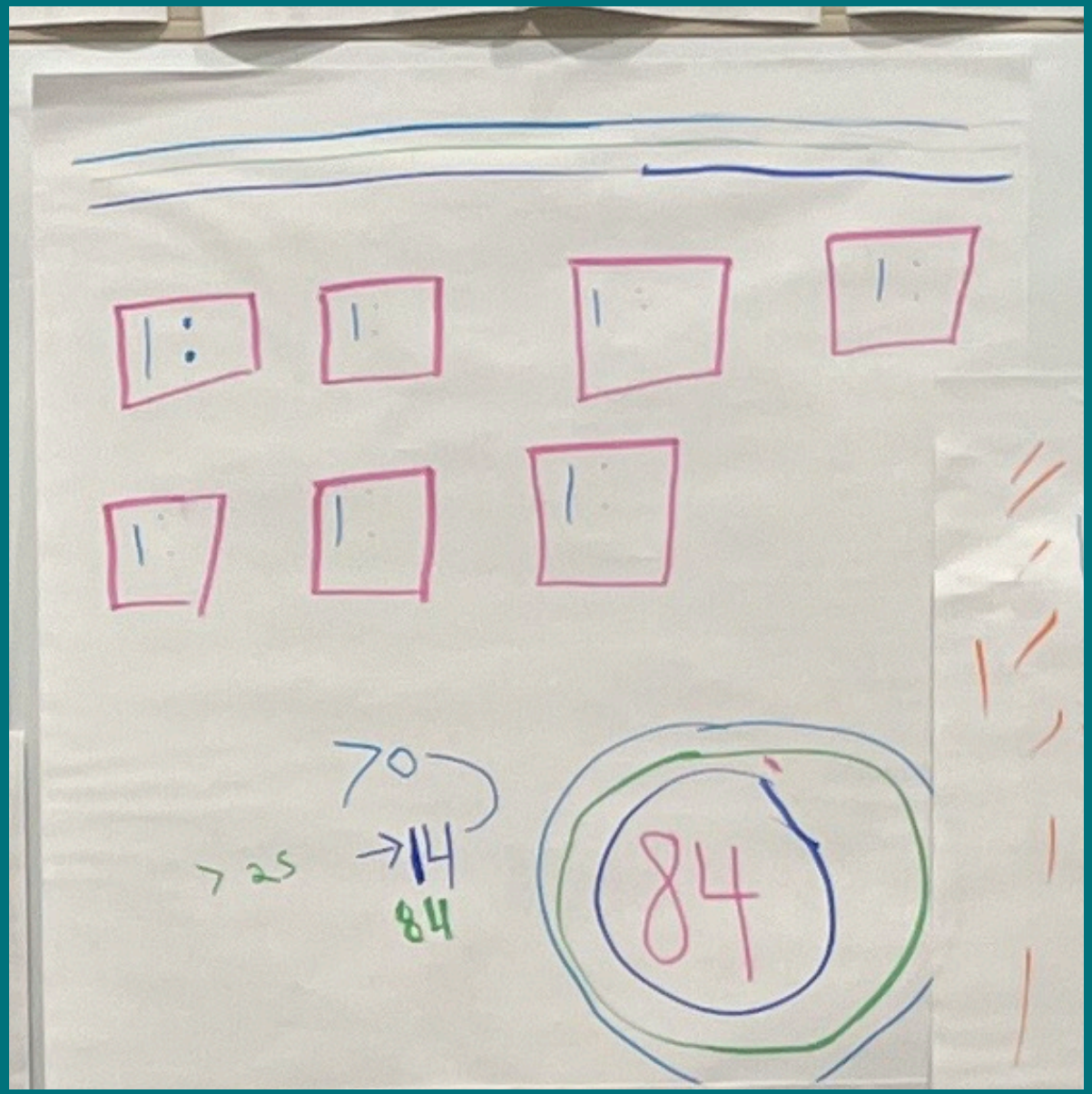
A farm is selling eggs by the dozen.

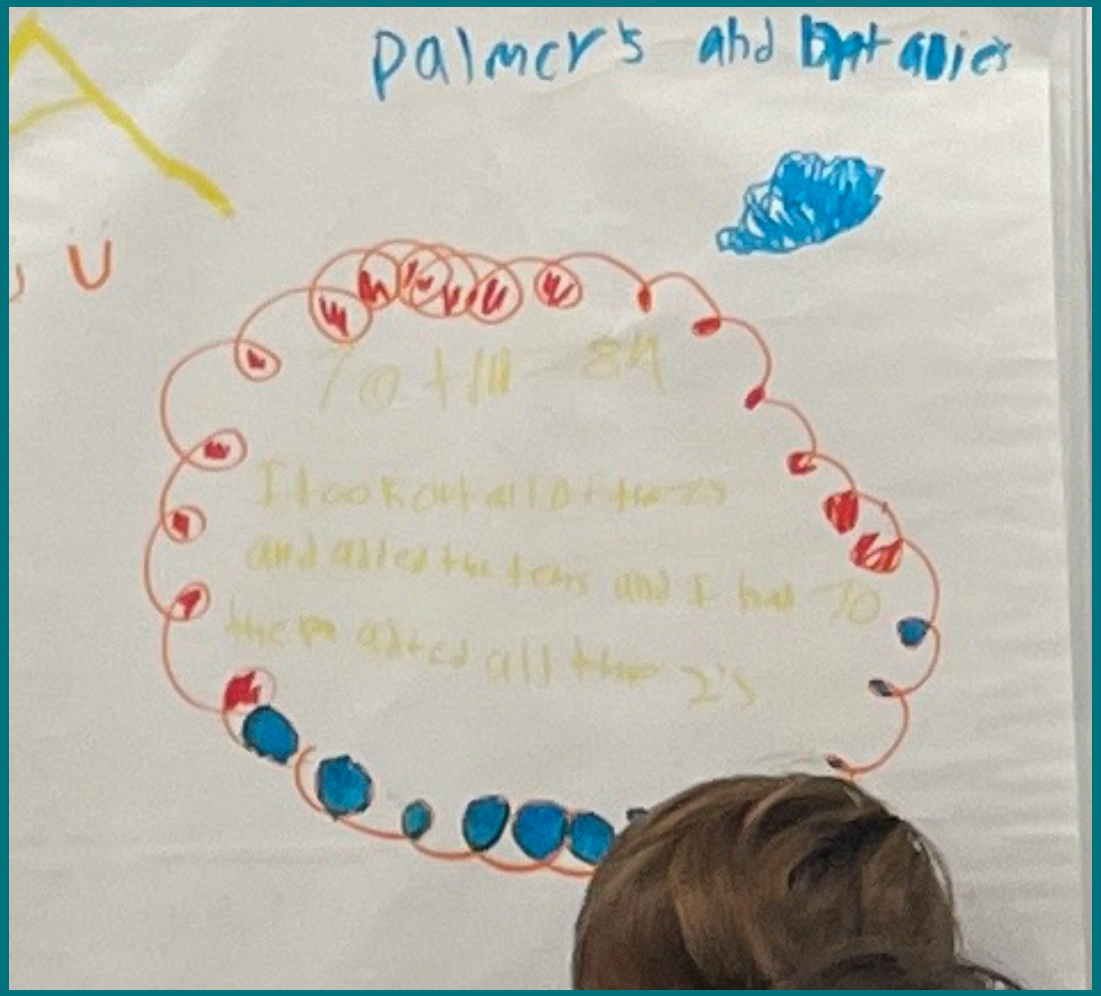
You buy 7 dozen eggs.

A farm is selling eggs by the dozen.

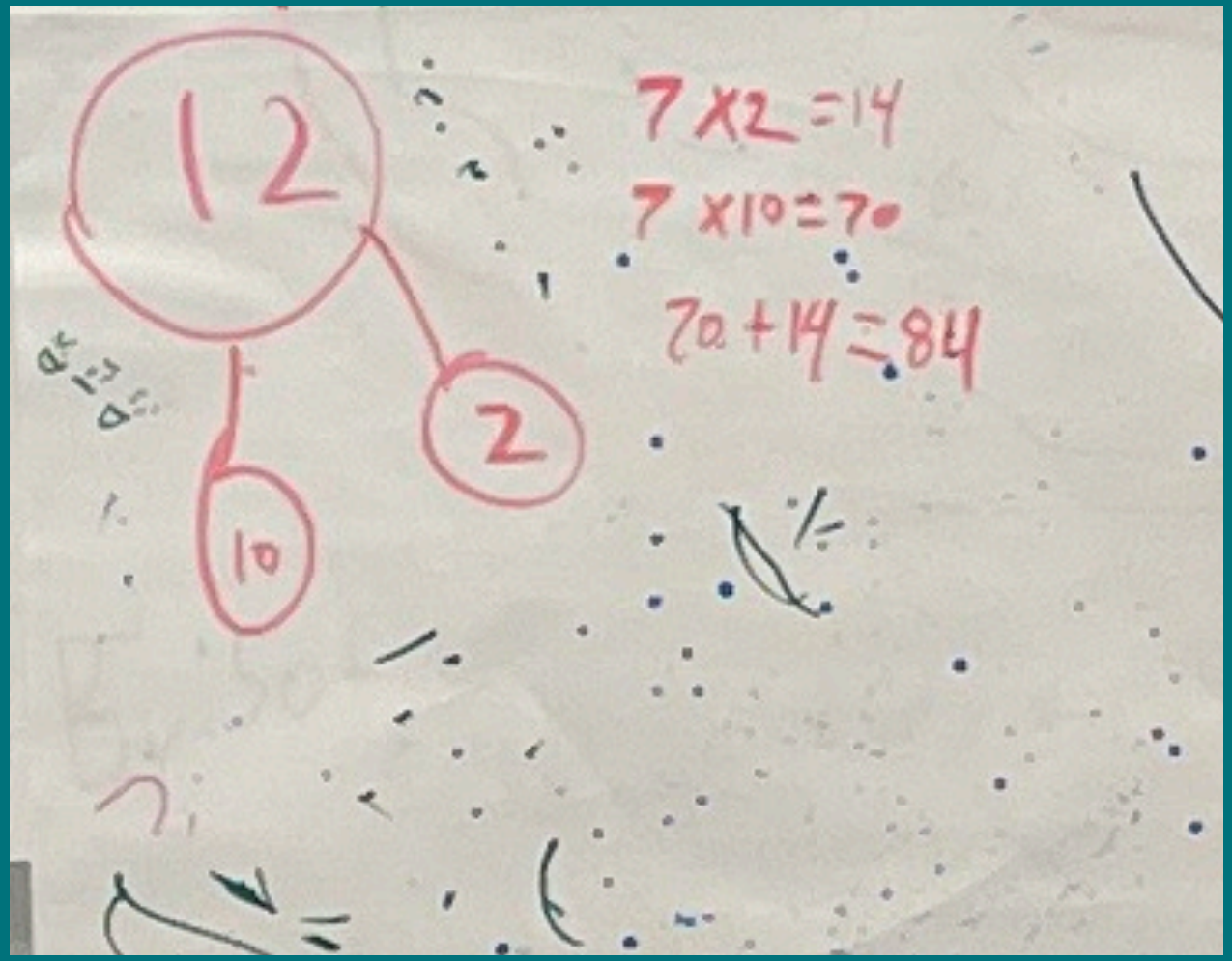
You buy 7 dozen eggs. How many eggs do you have?


1
2
3
4
5
6
7
84
eggs
12 X 7 = 84


70
14
84
84

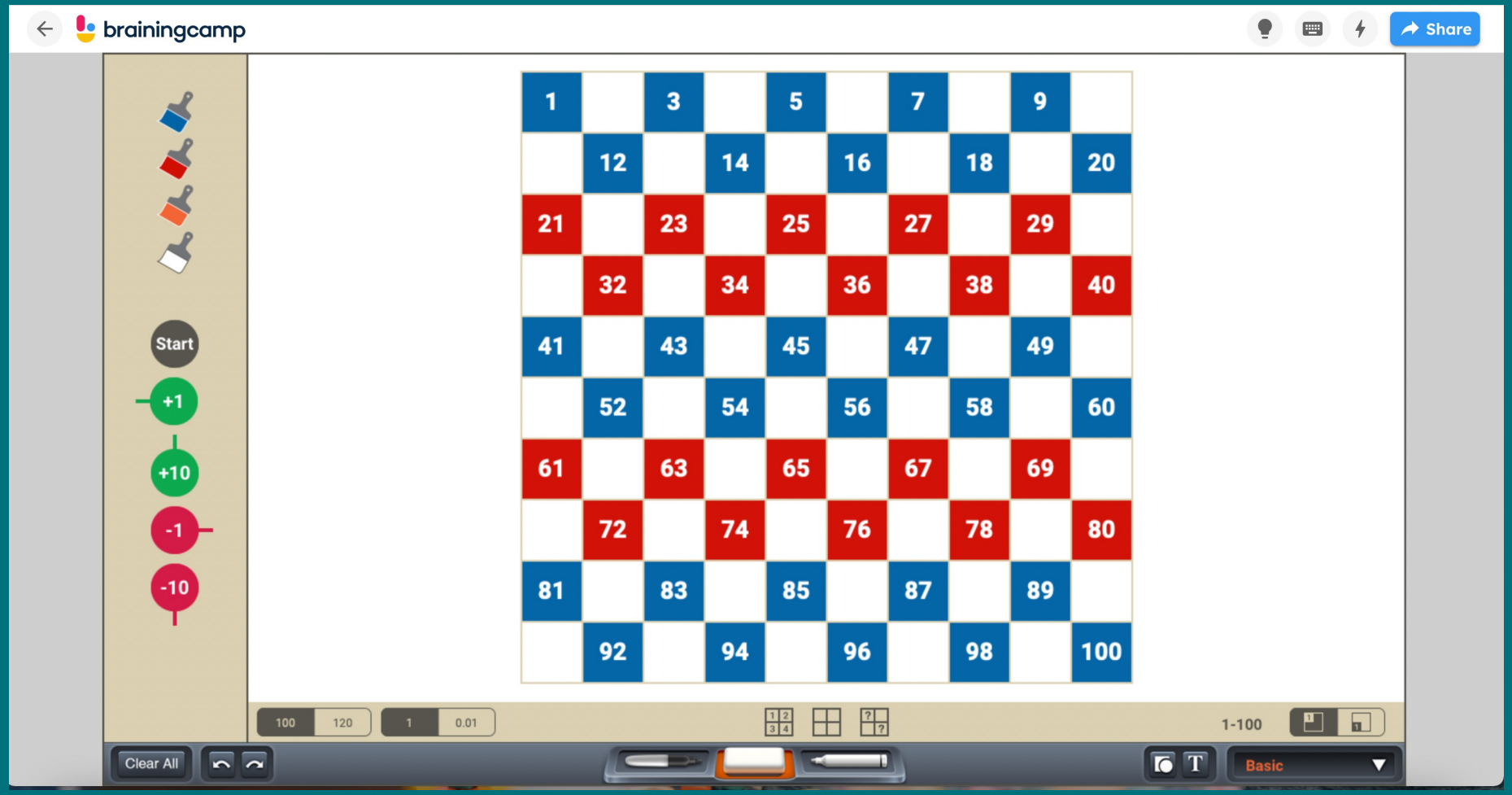


"I took a 10 from the 12 and added the tens and had 70 and I had 70 then and added all the 2s."


12
2
10
7 X2 = 14
7 X10 = 70
70 + 14 = 84

Tommy's Challenge

Tommy's Challenge



THANK YOU!

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