Warmup $4/\left(\frac{111111111}{12345679}\right)$

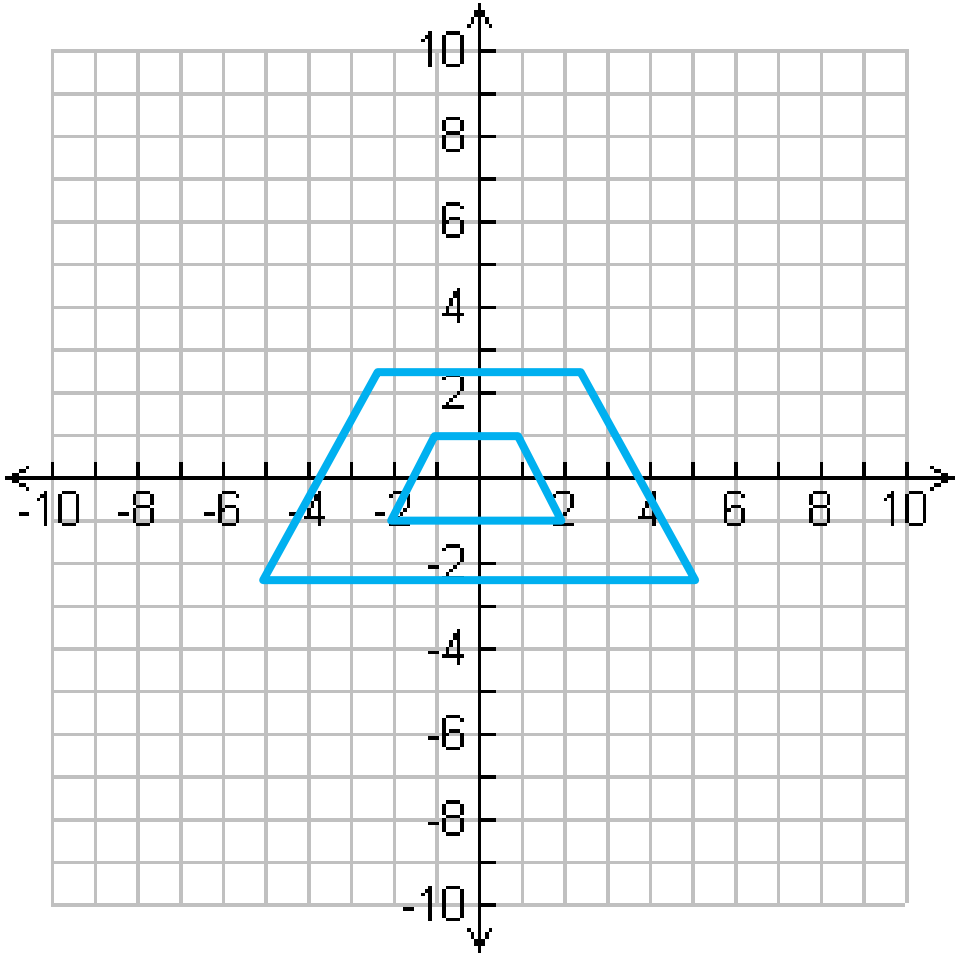
MAKE SURE YOU HAVE:

- **A regular whiteboard, a graphing sheet, a marker, and an eraser**

1. **(On your graphing sheet)** Draw the trapezoid with vertices (-1, 1), (1, 1), (-2, -1), (2, -1)
2. **(On your warmup page)** Multiply both coordinates of each point by 2.5 and write down the new coordinates.
3. **(On your graphing sheet)** Draw a trapezoid with these new coordinates.
4. **(On your warmup page)** Compare both trapezoids. What is the same about them? What is different?
5. **(On your warmup page)** Find the length of the bottom sides of both trapezoids, and divide them. What do you get?

(-1, 1), (1, 1), (2, -1), (-2, -1)

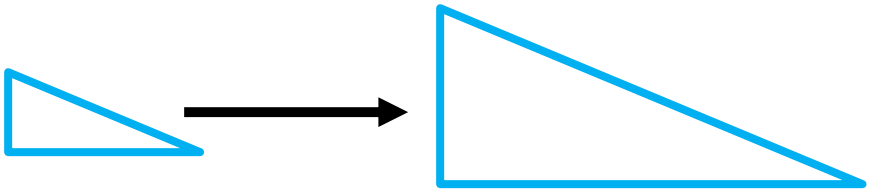
Multiply coordinates by **2.5**



In the warmup…

- You just did a **DILATION.**

- **<u>Dilation</u> –** A transformation that creates a figure that is the <u>same shape</u> but <u>different sizes</u>



- **<u>Scale Factor</u> –** the number you are multiplying by in a dilation
  - Represented using the variable **"k"**
- We'll do a few more of these later in the week!

Go over benchmarks

PROBABILITY!!!

Fast food!

- Milton is getting a combo meal at Burgers-R-Us. For his sandwich, he can choose a hamburger, cheeseburger, or chicken sandwich. He can choose between regular fries or curly fries. For his drink, he may choose Coke, Diet Coke, Sprite, or Dr. Pepper. How many different possibilities does Milton have for his combo meal? Show your work using a tree diagram, table, or list.

- Suppose Milton chooses his entire combo meal randomly. What is the probability he will end up with a Cheeseburger, curly fries, and a Sprite?

Flipping coins!

- If you flip a coin, what is the probability you will get heads? $\frac{1}{2}$
- If you flip a coin three times, how many possibilities are there for the results? 8
- If you flip a coin three times, what is the probability you will get heads each time?

$$\frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2} = \frac{1}{8}$$

- What is the probability of getting heads, then tails, then tails?

$$\frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2} = \frac{1}{8}$$

- What is the probability you will get one head and two tails?

HTT, THT, TTH: $\frac{3}{8}$

IMPORTANT CONCEPT OF PROBABILITY

- **The probability of two events “A” AND “B” both happening is the product of the probabilities of A and B.**

If you roll a die…

- What is the probability you will get a 3? $\frac{1}{6}$
- What is the probability you will get an even number? $\frac{3}{6} \rightarrow \frac{1}{2}$
- What is the probability you will get a number greater than 4? $\frac{2}{6} \rightarrow \frac{1}{3}$

Dice rolling

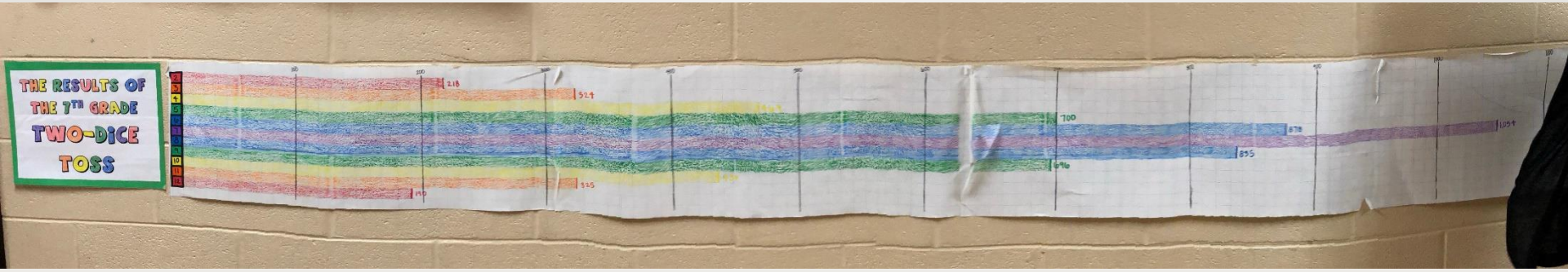
		Outcome of First Die					
		1	2	3	4	5	6
Outcome of Second Die	1	2	3	4	5	6	7
	2	3	4	5	6	7	8
	3	4	5	6	7	8	9
	4	5	6	7	8	9	10
	5	6	7	8	9	10	11
	6	7	8	9	10	11	12

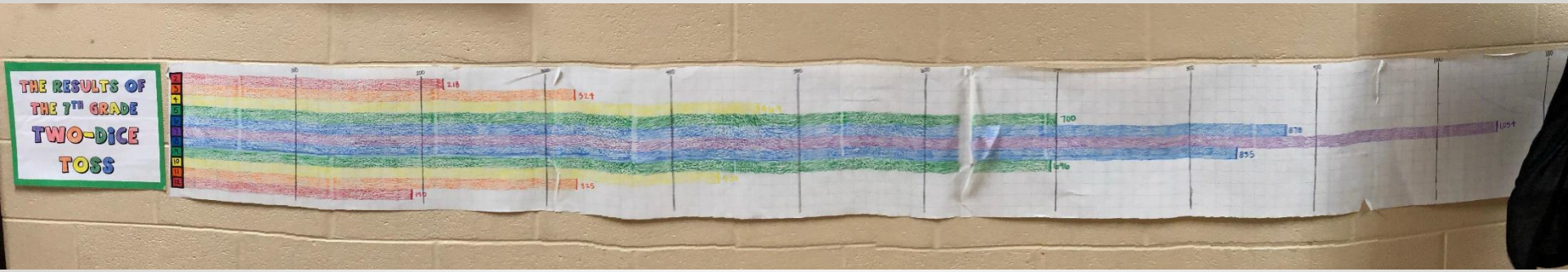
- When you roll TWO dice, how many possible c are there? **36**
- How many possibilities are there for the total?

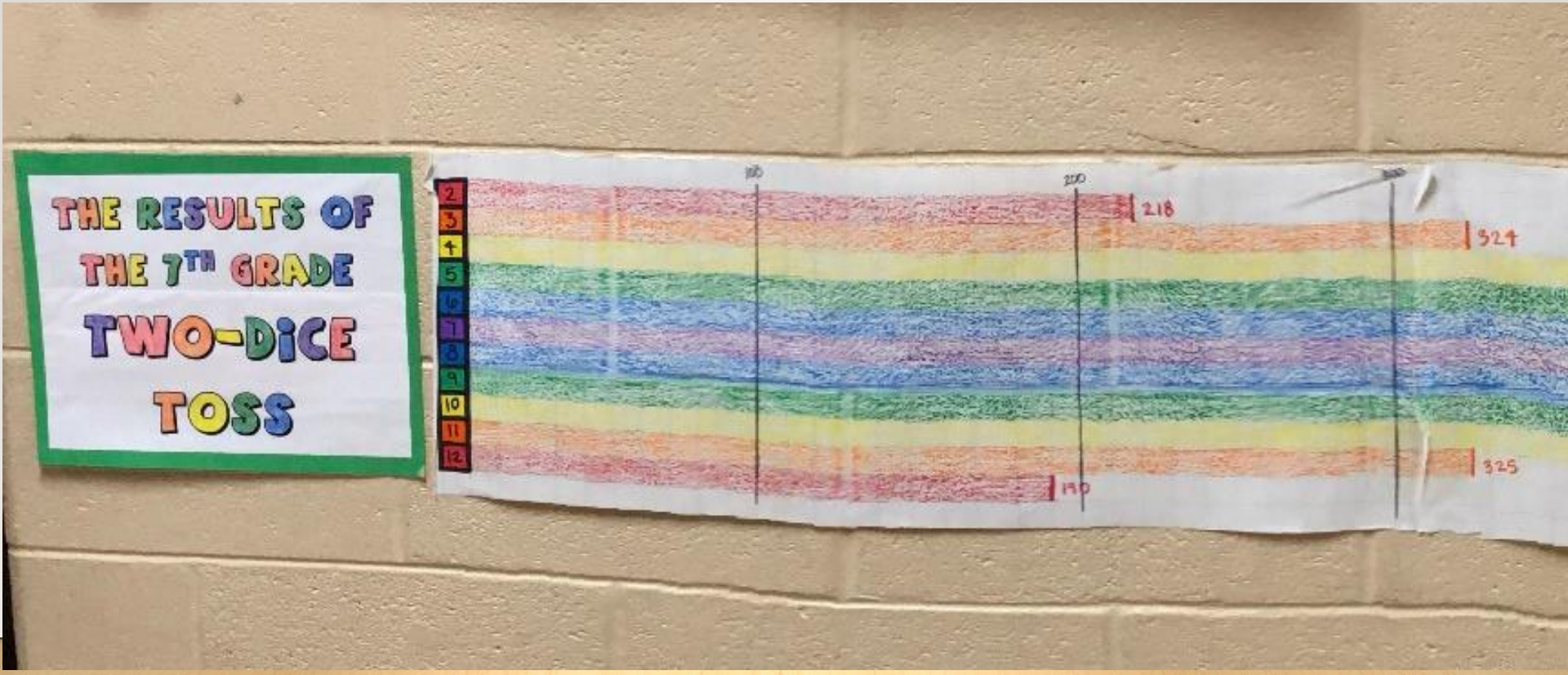
11 (Any number from 2 to 12)

- Are each of these totals equally likely? Why or why not?

No; there are more combinations to get some totals than others




THE RESULTS OF
THE 7TH GRADE
TWO-DICE
TOSS


THE RESULTS OF
THE 7TH GRADE
TWO-DICE
TOSS
2
3
4
5
6
7
8
9
10
11
12
100
200
300
218
324
325
190