

Powerful Ways of Thinking: Blowing Things out of (or into) Proportion –Ted Coe
<https://www.tedcoe.com/math/MMM22>

1. You have three broomsticks...

- The RED broomstick is three feet long 
- The YELLOW broomstick is four feet long 
- The GREEN broomstick is six feet long 

How much longer is the GREEN broomstick than the RED broomstick?

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How much longer is the YELLOW broomstick than the RED broomstick?

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2. The GREEN broomstick is _____ times as long as the YELLOW broomstick.

The YELLOW broomstick is _____ times as long as the GREEN broomstick.

The YELLOW broomstick is _____ times as long as the RED broomstick.

The RED broomstick is _____ times as long as the YELLOW broomstick.

3. A certain stock started at a value \$74. One year later it was valued at \$89.54. By what percent did the stock's value increase?

4. What terms and words come to mind when you hear the word "proportional"?

5. In the image, the length of the blue line increased as shown. If the length of the red line is proportional to the length of the blue line, what is the length of the longer red line? Can you explain it without using a formula?

Are there any meaningful multiplicative comparisons in the diagram?

- What is meaningful about the number $\frac{5}{3}$ in the diagram?
- What is meaningful about the number $\frac{2}{3}$ in the diagram?
- If we imagine the blue line growing across all possible lengths, what happens with the red line? Are you sure?
- Can you write an equation that shows the relationship between the lengths of the blue and red lines?

