# *Wouldn't It Be Nice*

## Presented by Bill Bellows

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InThinking Network
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Canoga Park, CA
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**Cal Poly San Luis Obispo**
**October 15, 2015**

# Abstract

While admitting to not being a surfer, Brian Wilson, a founding member of The Beach Boys, proudly admits to being a song writer. In tribute, he was inducted into the Songwriter's Hall of Fame. His classics include *California Girls*, *Good Vibrations*, and *Wouldn't It Be Nice*, including the yearning, "Wouldn't it be nice if we were older, Then we wouldn't have to wait so long." In reflecting on Wilson's adolescent wishfullness, this presentation includes a wishfullness that individuals, from college students to senior executives, and…….

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# Abstract

….and organizations; public, private, and even governments; improve their understanding of variation and how it impacts the systems they design, produce, and operate. Wouldn't it be nice if they were mindful of W. Edwards Deming's adage, *"Variation there will always be, between people, in output, in service, in product.*

In the spirit of Brian Wilson's adolescent wishfullness, wouldn't it be nice if the great illusion of independent parts and tasks was replaced by the realism of unity and interconnectedness and the amazing prospects for teamwork.

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# Agenda

- *Questions*
- *Modes of Thinking*
- *Explanations*
- *Opportunities to Learn*

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# Questions

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# Q - Last in Class

What do you call the person who graduates last in his or her class in medical school?

What do you call the person who graduates last in his or her class at West Point?

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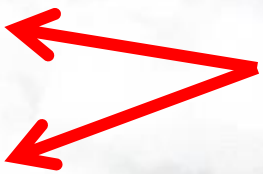
# Q - Sorting Numbers

Which 2 of these 3 numbers are closest to being the ***same***?

**A 5.001**

**B 5.999**

**C 6.001**



***Begin with 5***

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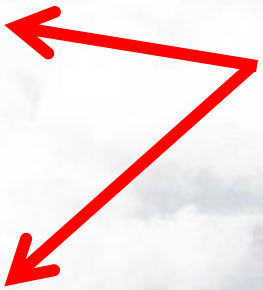

***End with .001***

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# Q - Fizzy Drink Flavor

Imagine a can of a fizzy drink (soda), filled with to the top, but without a closing cover. Now, imagine a small flavor probe in the can, wirelessly connected to a pen in your hand, used to record a flavor profile on a sheet of paper, using flavor as the vertical scale and time on the horizontal scale.

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# Q - Fizzy Drink Flavor


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# Q - Fizzy Drink Flavor

At the moment the can is sealed, the probe provides an initial reading of the flavor of the fizzy drink.

From this starting point, what is the expected flavor of the drink over time?

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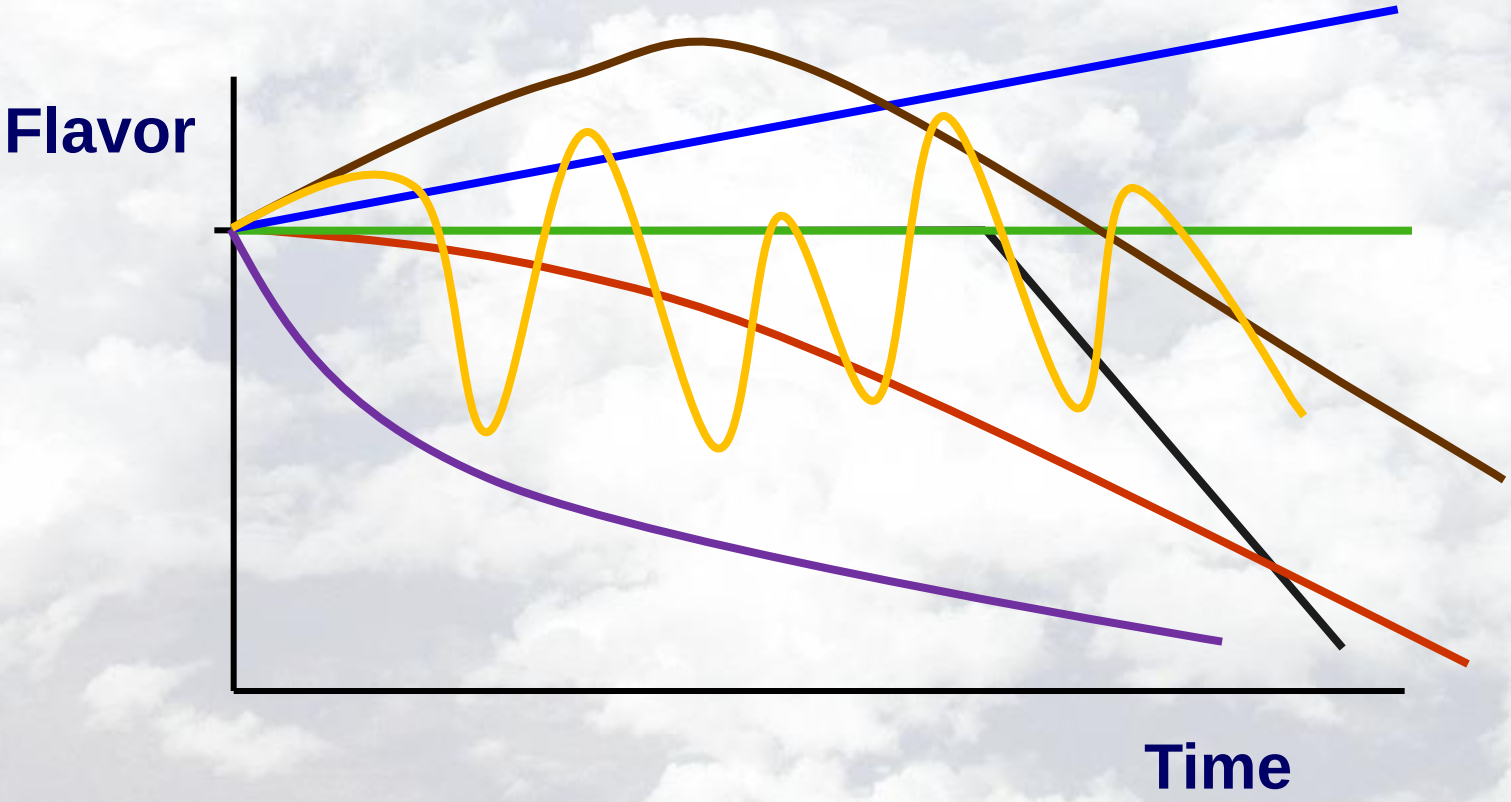
# Q – Previous Answers

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# Modes of Thinking

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# Modes of Thinking

- Categories
  - Absolutes
  - Discrete
  - Good vs. Bad, Smart vs. Dumb
- Continuum
  - Relative
  - Wholeness
  - Better/Faster/Cheaper/ Smarter/etc.


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# Modes of Thinking

- Categories
  - Absolutes
  - Discrete
  - Good vs. Bad, Smart vs. Dumb
  - How many students at SLO, how many class rooms?

- Continuum
  - Relative
  - Wholeness
  - Better/Faster/Cheaper/ Smarter/etc.
  - All students are different..

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# Explanations

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# Q - Last in Class

What do you call the person who grad*Doctor – Category Thinking*in medical school?

What do you call the person who grad*Goat – Continuum Thinking*at West Point?

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# Selecting a Surgeon

Which mode of thinking are we using when we seek a recommendation for a heart surgeon?

Which mode is being used when our health insurance provider suggests a less expensive heart surgeon?

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# Selecting a Surgeon

Which mode of thinking are we using when w*Continuum Thinking* ation for a heart surgeon?

Which mode is being used when our health in*Category Thinking* uggests a less expensive heart surgeon?

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# Counting

Which mode of thinking are we using when we count sheep, customers, or the number of goals scored by Wayne Rooney against Liverpool?

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Which mode of thinking are we using when we count sheep, customers, or the number of goals scored by Wayne Rooney against Liverpool?

*Category Thinking*

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# Implications of Counting

- The process of counting ignores the differences between items in a given category
- This is the logic of *Interchangeable Parts*
- All items within a category are considered to be perfectly *interchangeable*

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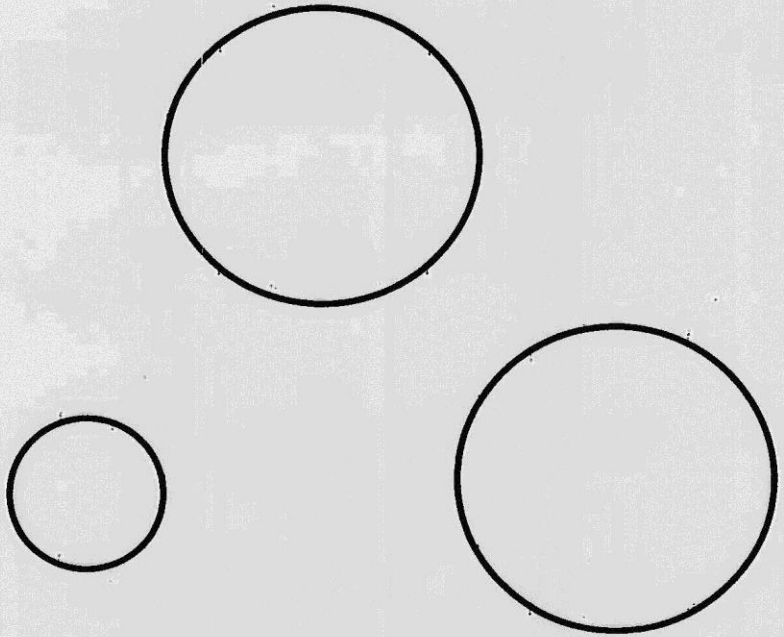
Name:_____ Age:_____

Connect the 2 of these 3 circles that are closest to being the same.



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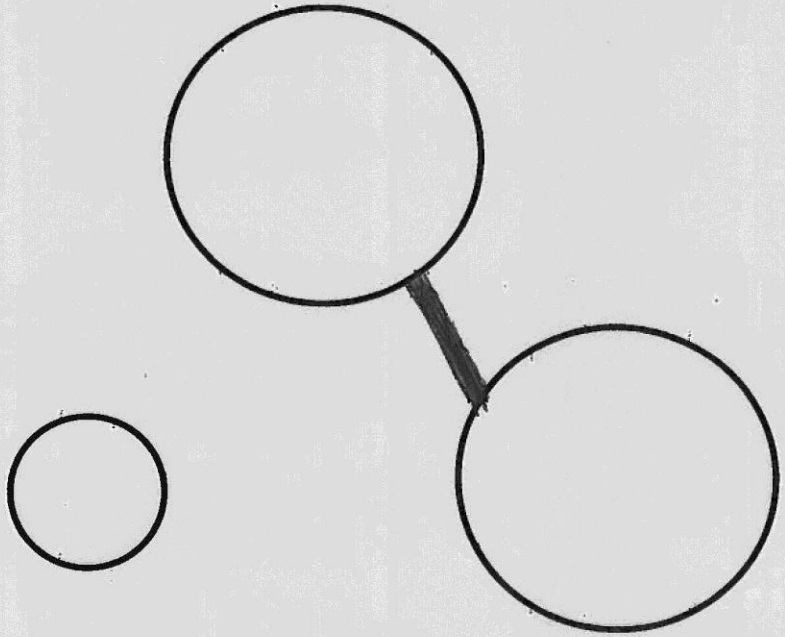
Name: A. J. Age: 9 5/12

Connect the 2 of these 3 circles that are closest to being the same.



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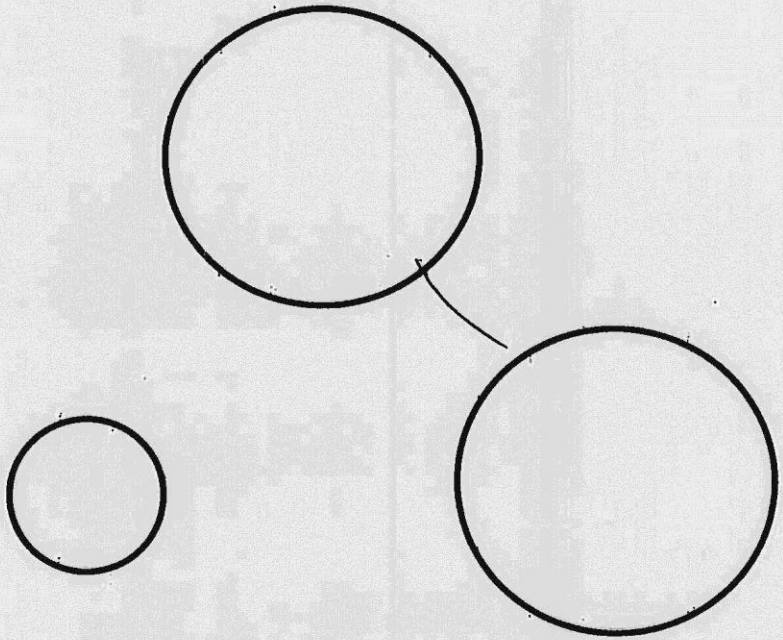
Name: Wilson Bellows Age: 6

Connect the 2 of these 3 circles that are closest to being the same.



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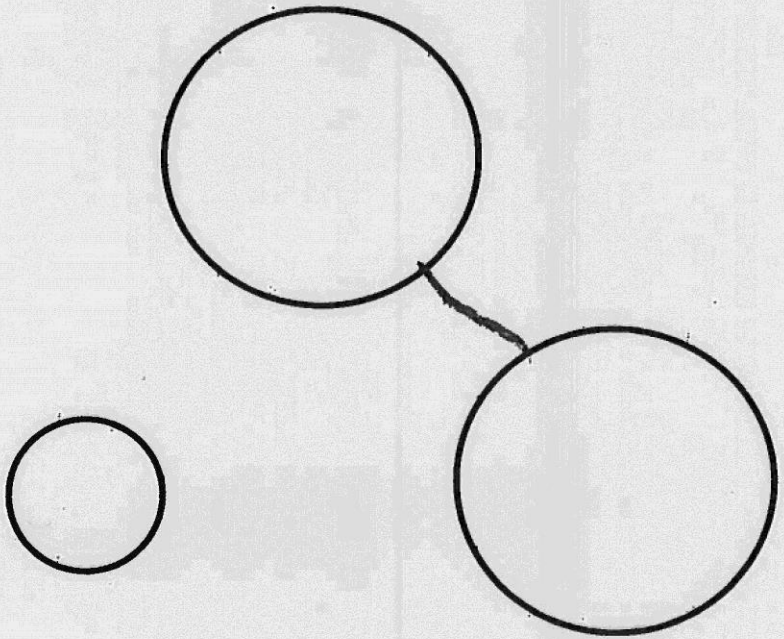
Name: Andrew Age: 6

Connect the 2 of these 3 circles that are closest to being the same.



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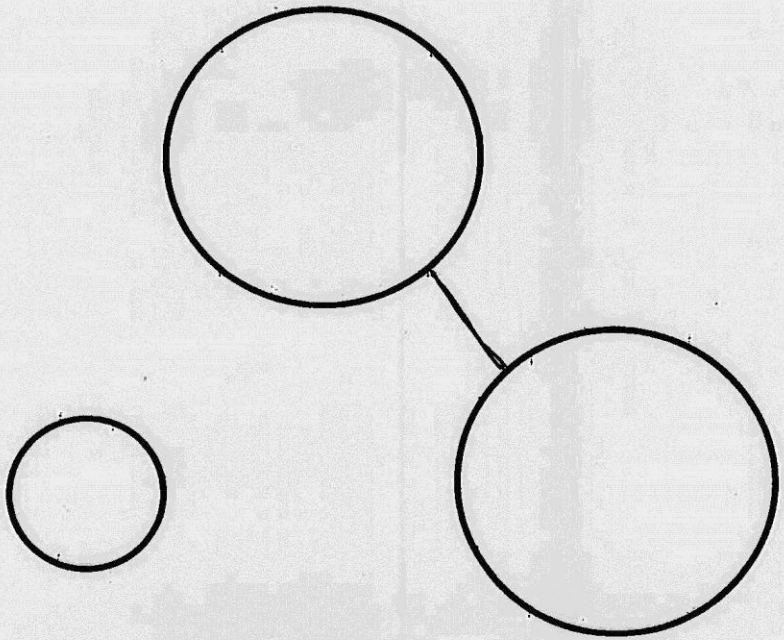
Name: Amanda Havey Age: 9 1/2

Connect the 2 of these 3 circles that are closest to being the same.



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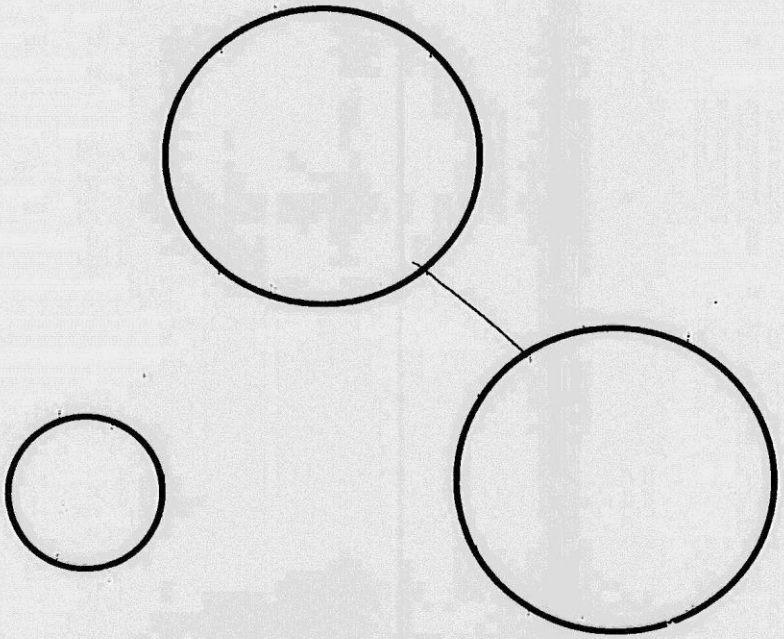
Name: Monica Pulido Age: 9 11/12

Connect the 2 of these 3 circles that are closest to being the same.



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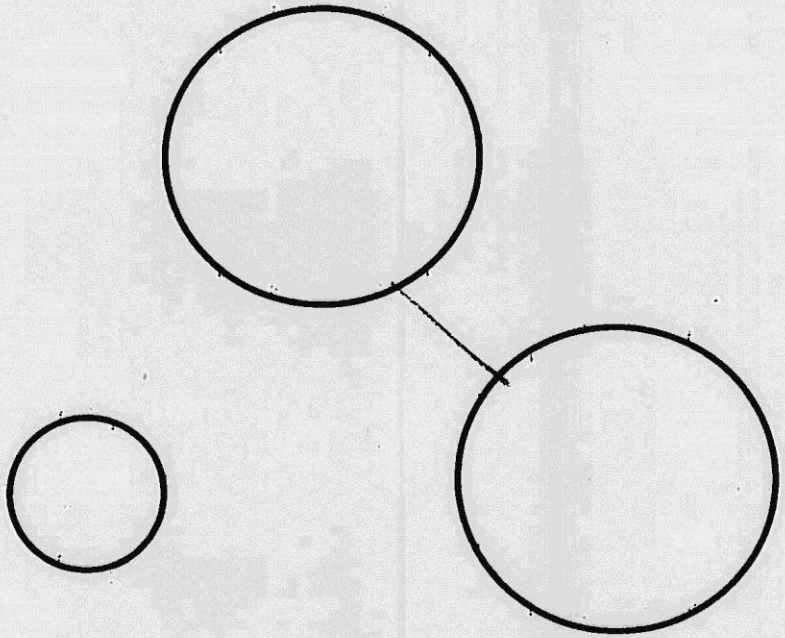
Name: Mrs. Grosskopf Age: old enough

Connect the 2 of these 3 circles that are closest to being the same.



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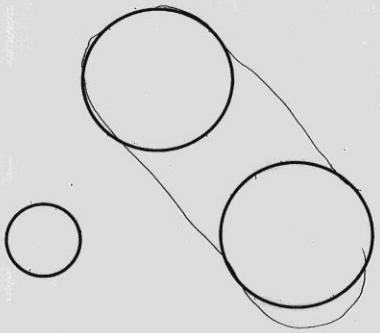
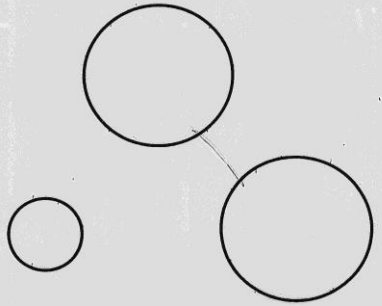
Name: Jon Gilmore Age: 9

Connect the 2 of these 3 circles that are closest to being the same.



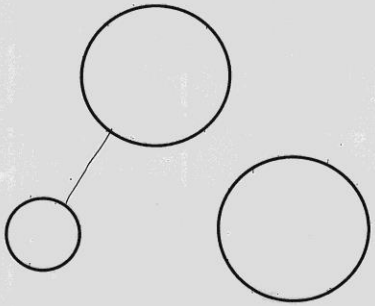
Name: Gilmore Alex Age: 11

Connect the 2 of these 3 circles that are closest to being the same.



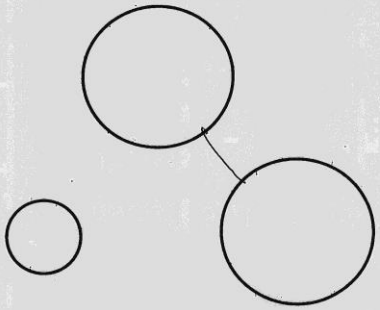
Name: Steve Gilmore Age: 14

Connect the 2 of these 3 circles that are closest to being the same.



Name: Ben Gilmore Age: 15

Connect the 2 of these 3 circles that are closest to being the same.



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**C 6.001**


*B & C – Continuum Thinking*

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# Q - Sorting Numbers

Which 2 of these 3 numbers are closest to being the ***same***?


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# Q - Sorting Numbers

Given a lower specification limit (LSL) of 5.000 and an upper specification limit (USL) of 6.000, which 2 of these 3 numbers (5.001, 5.999, 6.001) are closest to being the ***same***?


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# Q - Sorting Numbers

Given a lower specification limit (LSL) of 5.000 and an upper specification limit (USL) of 6.000, which 2 of these 3 numbers (5.001, 5.999, 6.001) are closest to being the ***same quality***?


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Given a lower specification limit (LSL) of 5.000 and an upper specification limit (USL) of 6.000, which 2 of these 3 numbers (5.001, 5.999, 6.001) are closest to being the ***same quality***?


*A & B – Category Thinking*

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# Q - Sorting Numbers

Is it likely that “Part C? will be measured again?


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# Q - Sorting Numbers

Is it likely that “Part C? will be measured again?

Is it likely that “Parts A or B” will be measured again?


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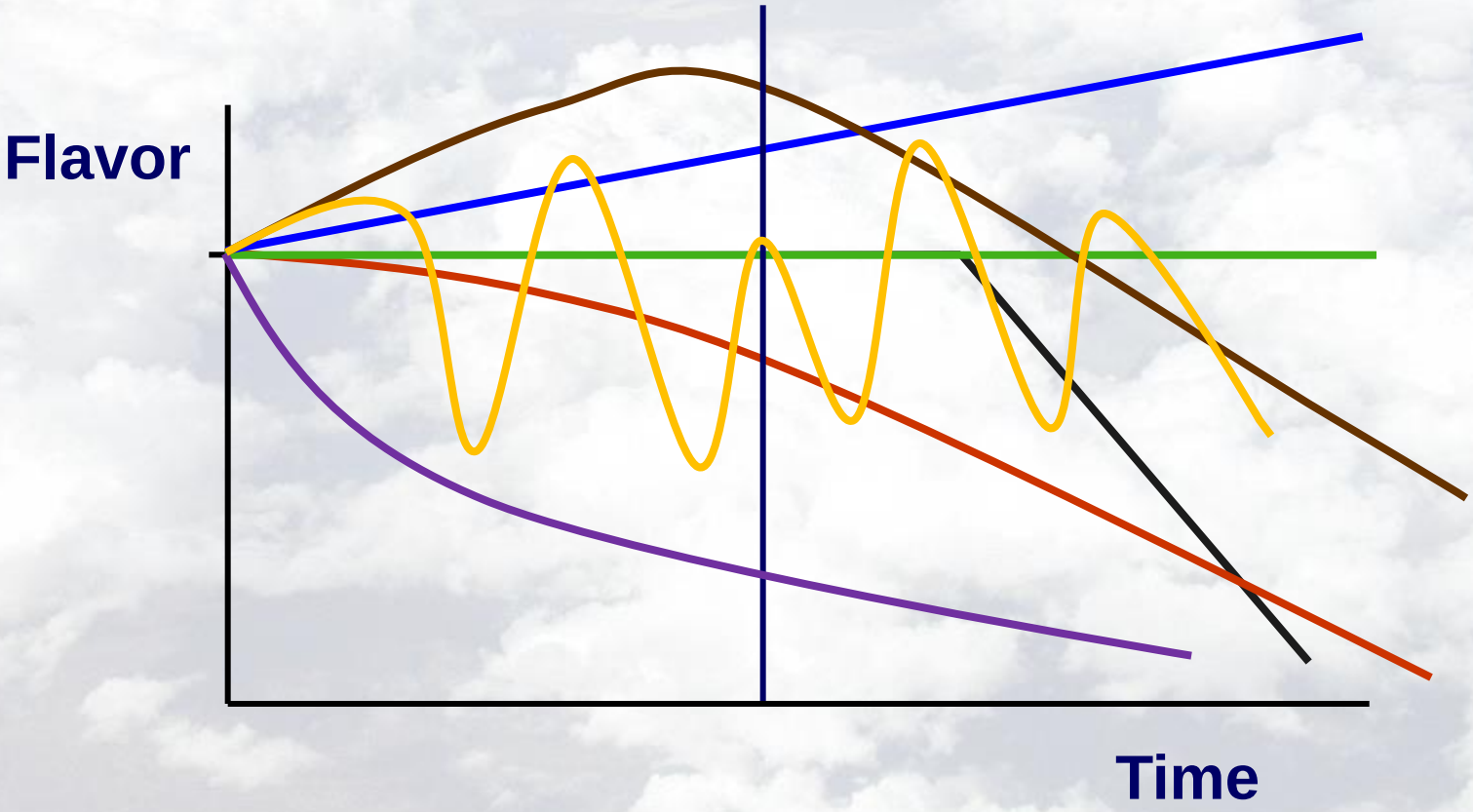
# Q – Previous Answers

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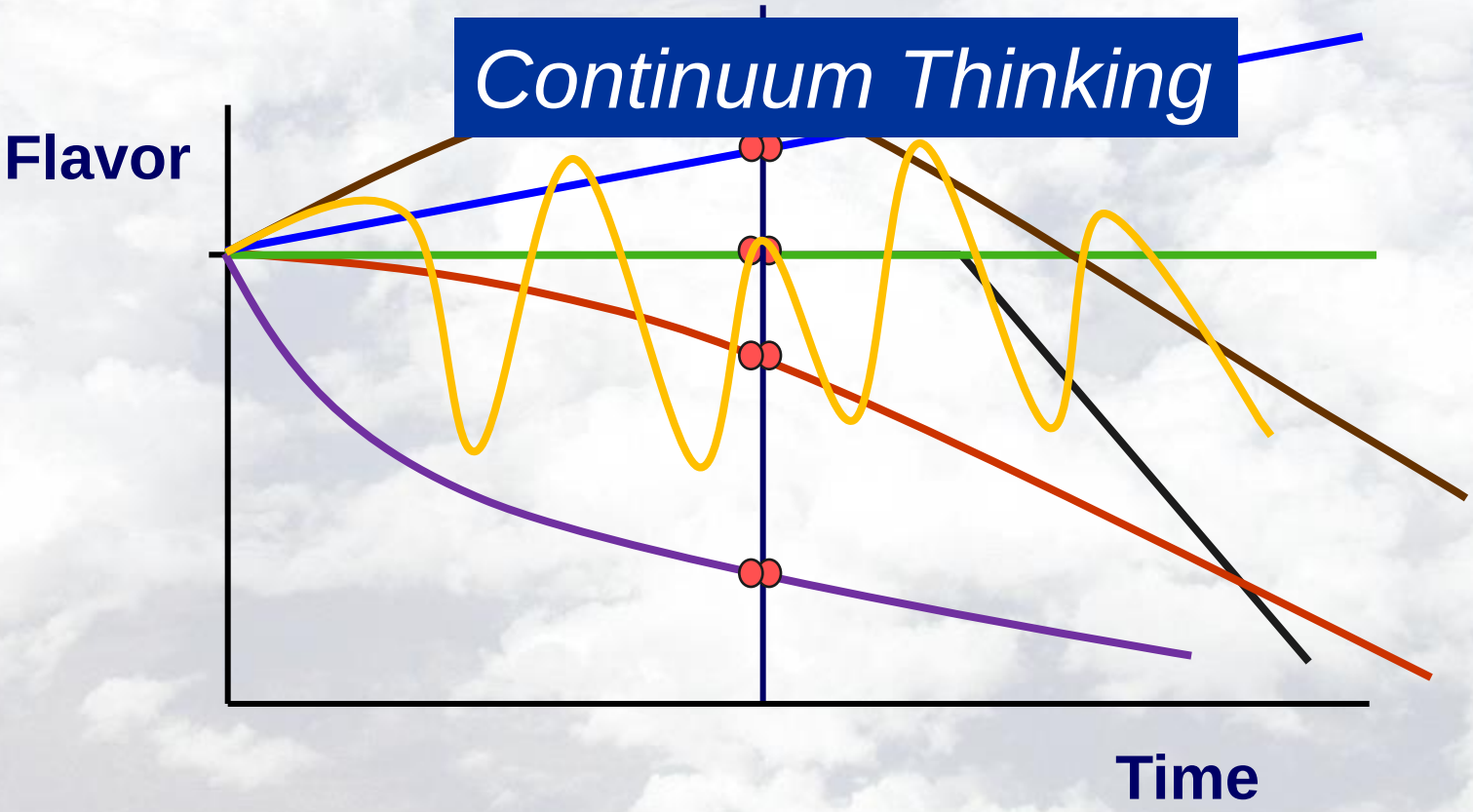


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# Q – Previous Answers

*Category Thinking?*


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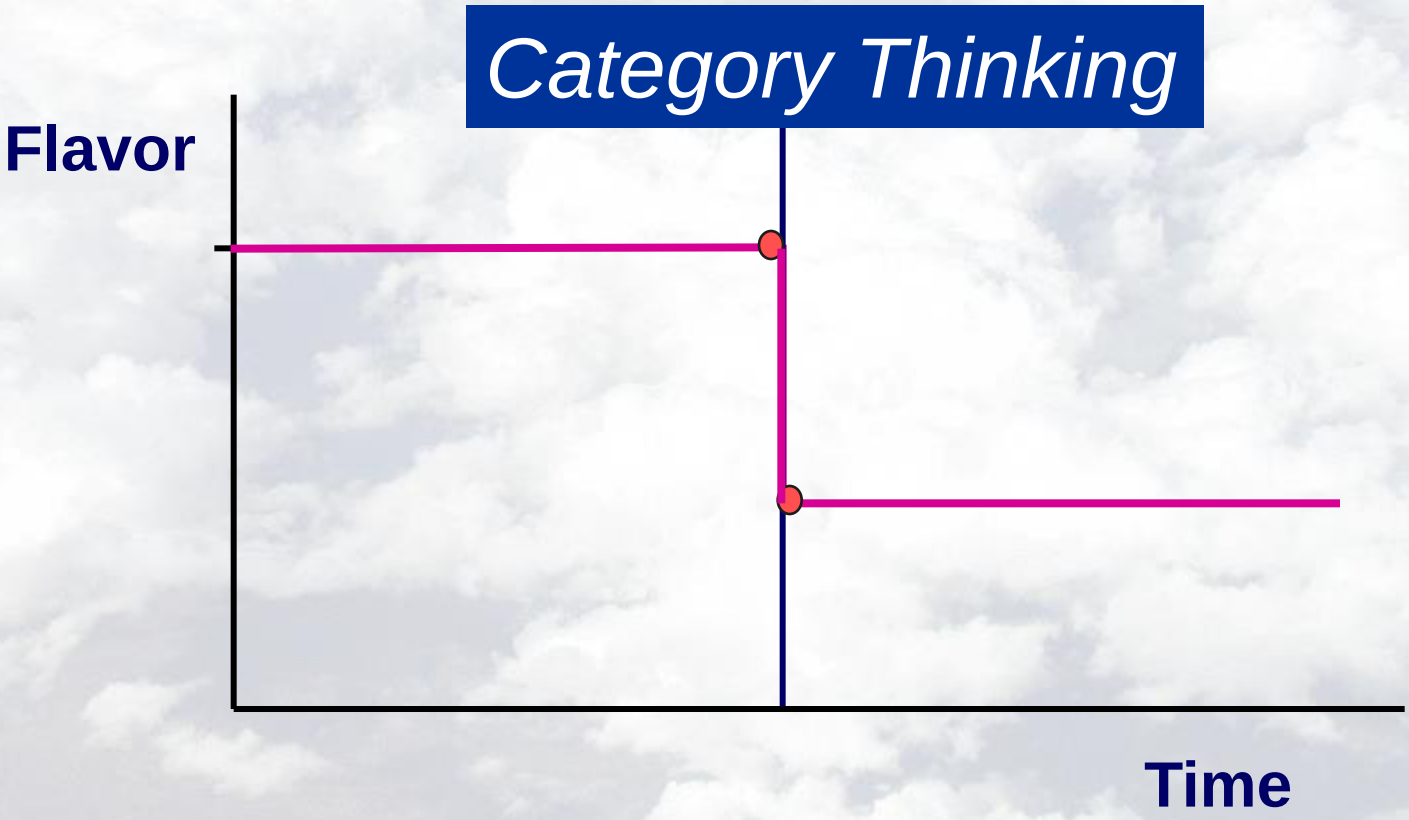


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# Interactions, Not Actions

One inspiration for challenging the mental model of “good parts are equally good” is the 1983 discovery by Ford Motor Company of a dramatic difference in warranty claims between automatic transmissions designed by Ford and produced in two locations, one in Batavia, Ohio, the other by Mazda in Japan.

# Interactions, Not Actions

Much to the surprise of Ford's corporate warranty office, the number of complaints associated with the erratic shifting of the transmissions produced in Batavia were a factor of 3 greater than the complaints against the transmissions produced by Mazda.

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# Interactions, Not Actions


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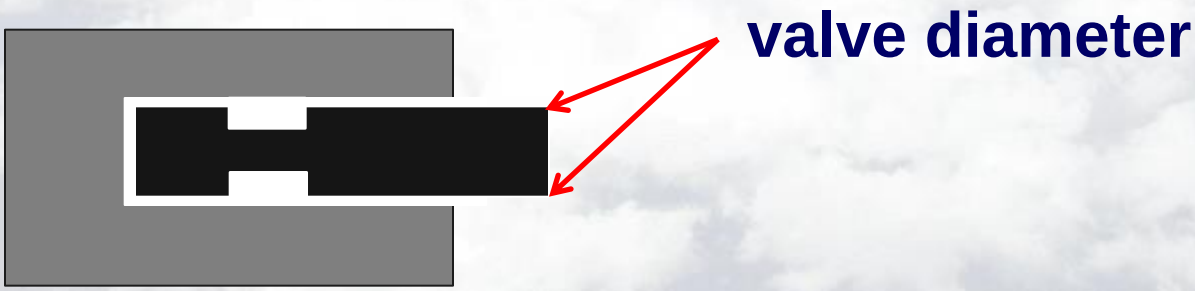
# Interactions, Not Actions

Upon close examination, Ford realized that their manufacturing focus was on the **valve diameter**

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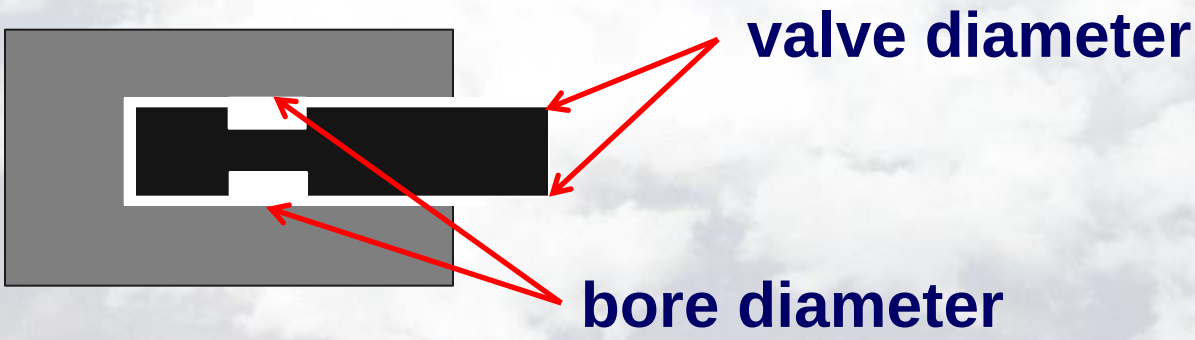
# Interactions, Not Actions

Upon close examination, Ford realized that their manufacturing focus was on the **valve diameter** and the **bore diameter**

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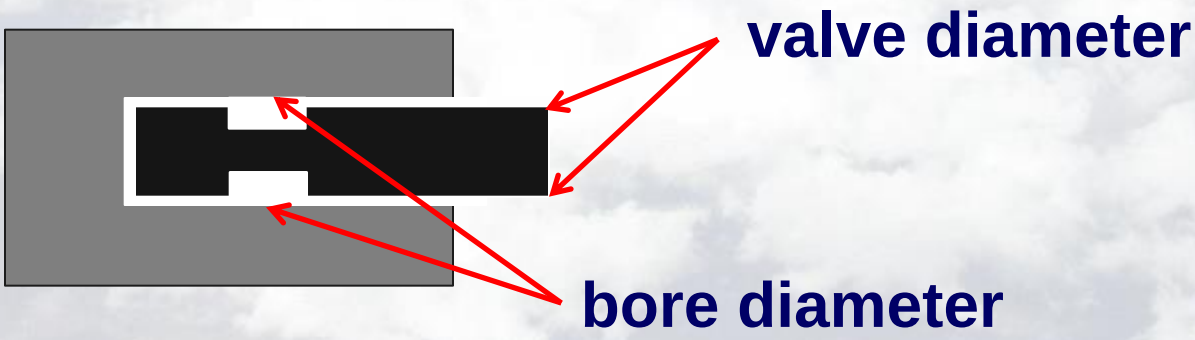
# Interactions, Not Actions

Upon close examination, Ford realized that their manufacturing focus was on the **valve diameter** and the **bore diameter**, ***taken separately***

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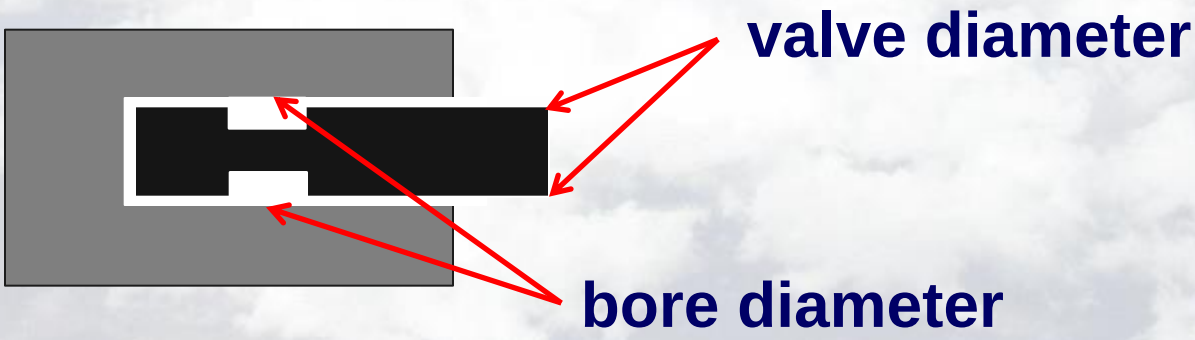


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# Interactions, Not Actions

Meanwhile, Ford learned that Mazda's manufacturing focus was to actively manage the **gap** between the outer diameter of the valves within the transmission and


the corresponding diameter of the valve bore.

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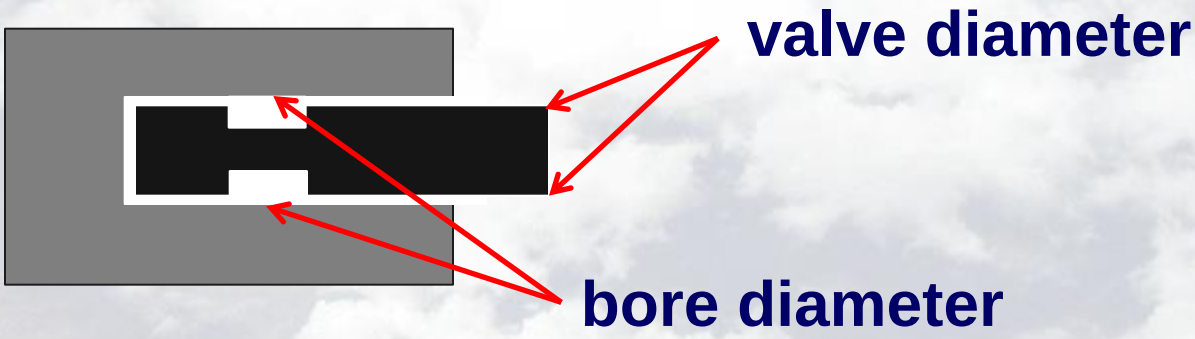
# Interactions, Not Actions

In doing so, Mazda's efforts realized the existence of an ideal gap, resulting from ideal ("target") values for both the bore and valve diameters, with an awareness that variation in gap size matters.

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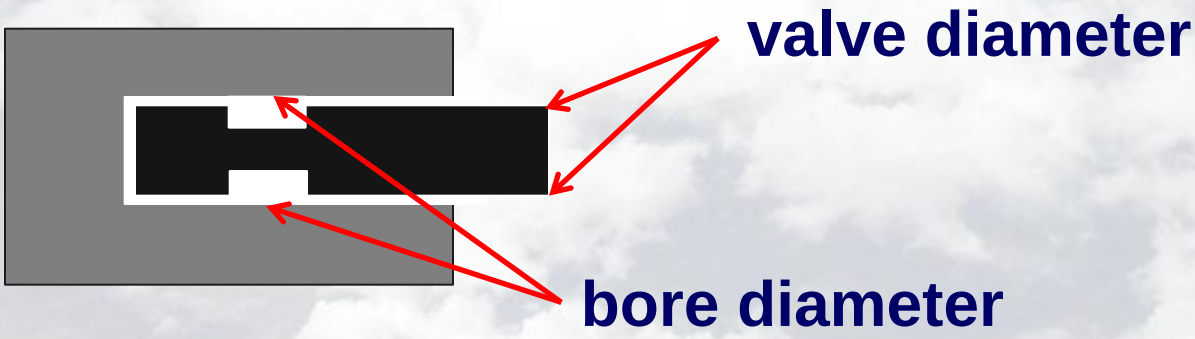


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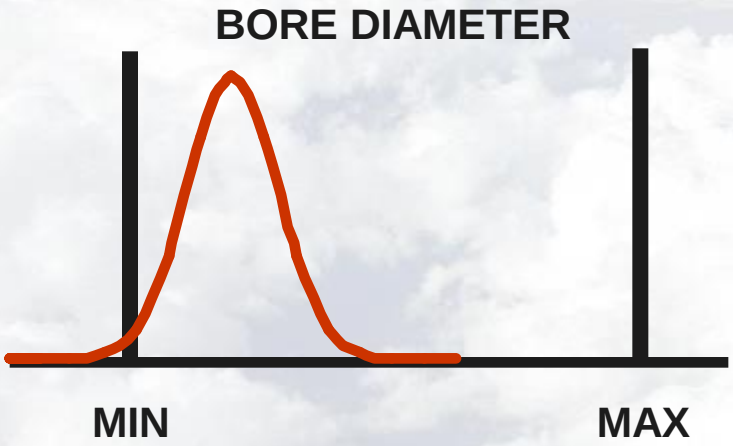
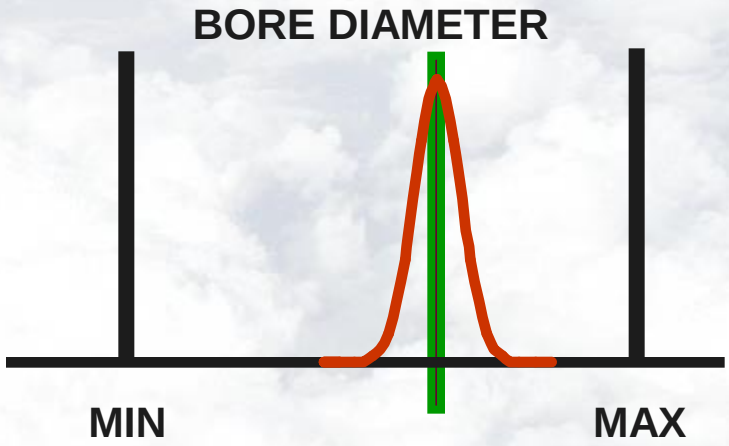
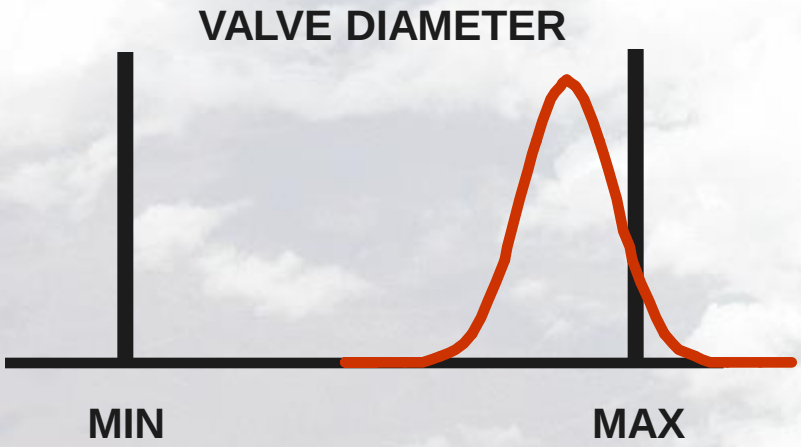
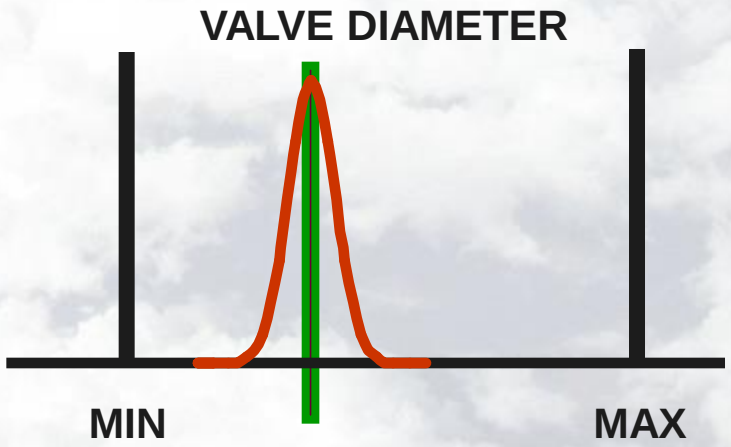
# Resource Management Contrast

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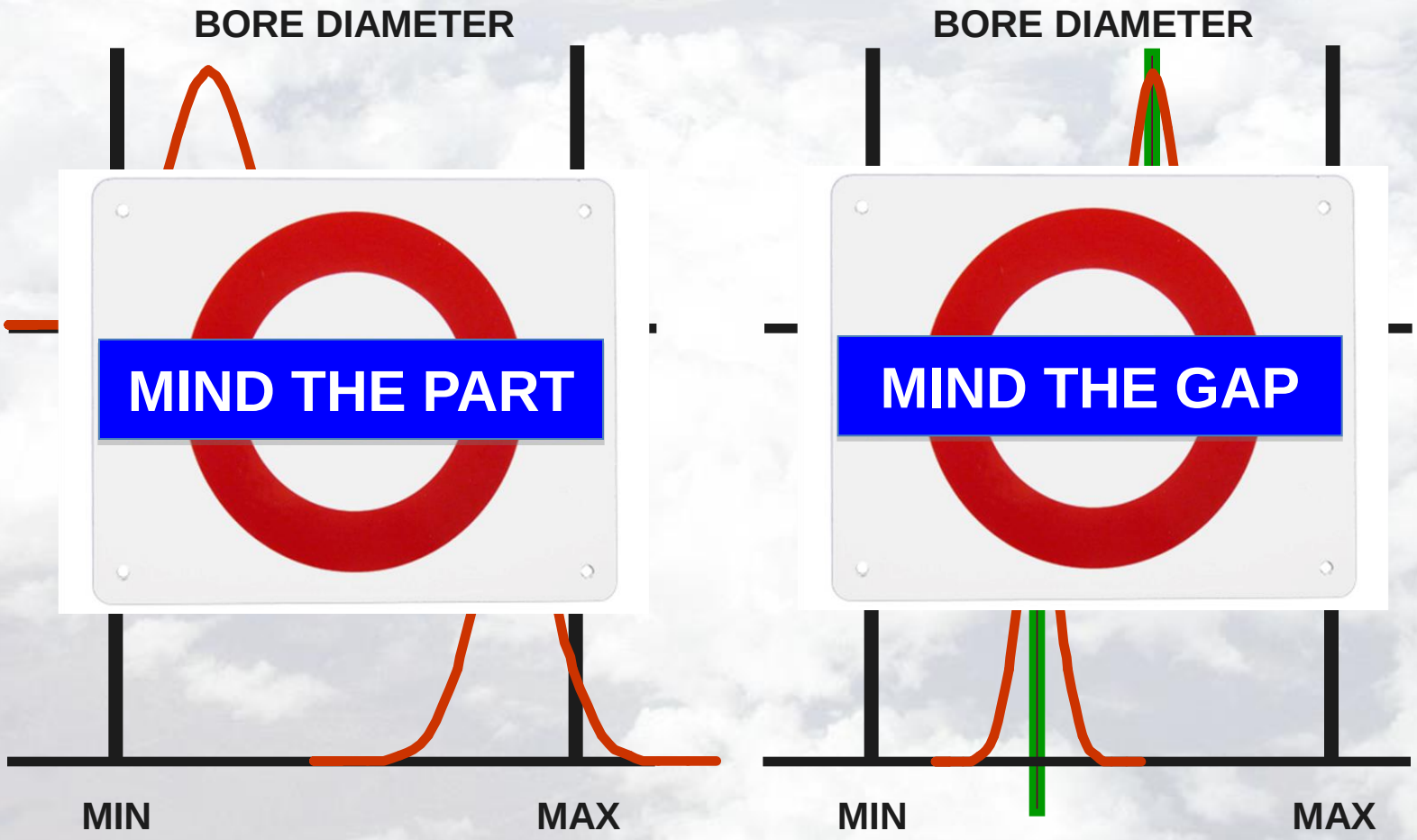
# Resource Management Contrast

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# Opportunities to Learn

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# *Wouldn't It Be Nice*

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