

Get Your Students Talking

Introducing Debate to the Math Classroom

Session 559, 3:30 – 4:30 PM

Grand Hyatt San Antonio, Lonestar Ballroom D

NCTM Annual 2017, San Antonio

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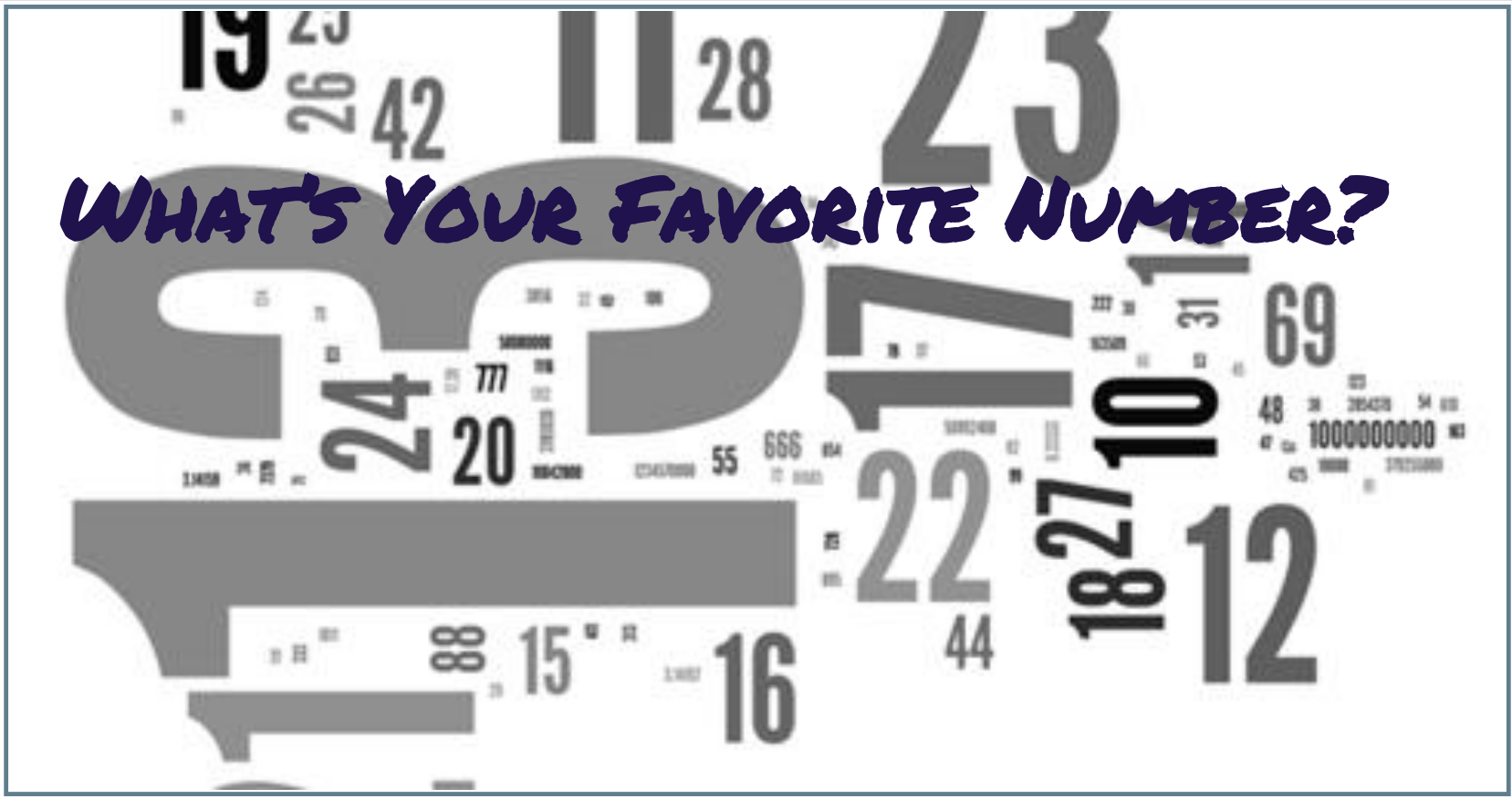
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WHAT'S YOUR FAVORITE NUMBER?

Why Debate?



Why Debate?



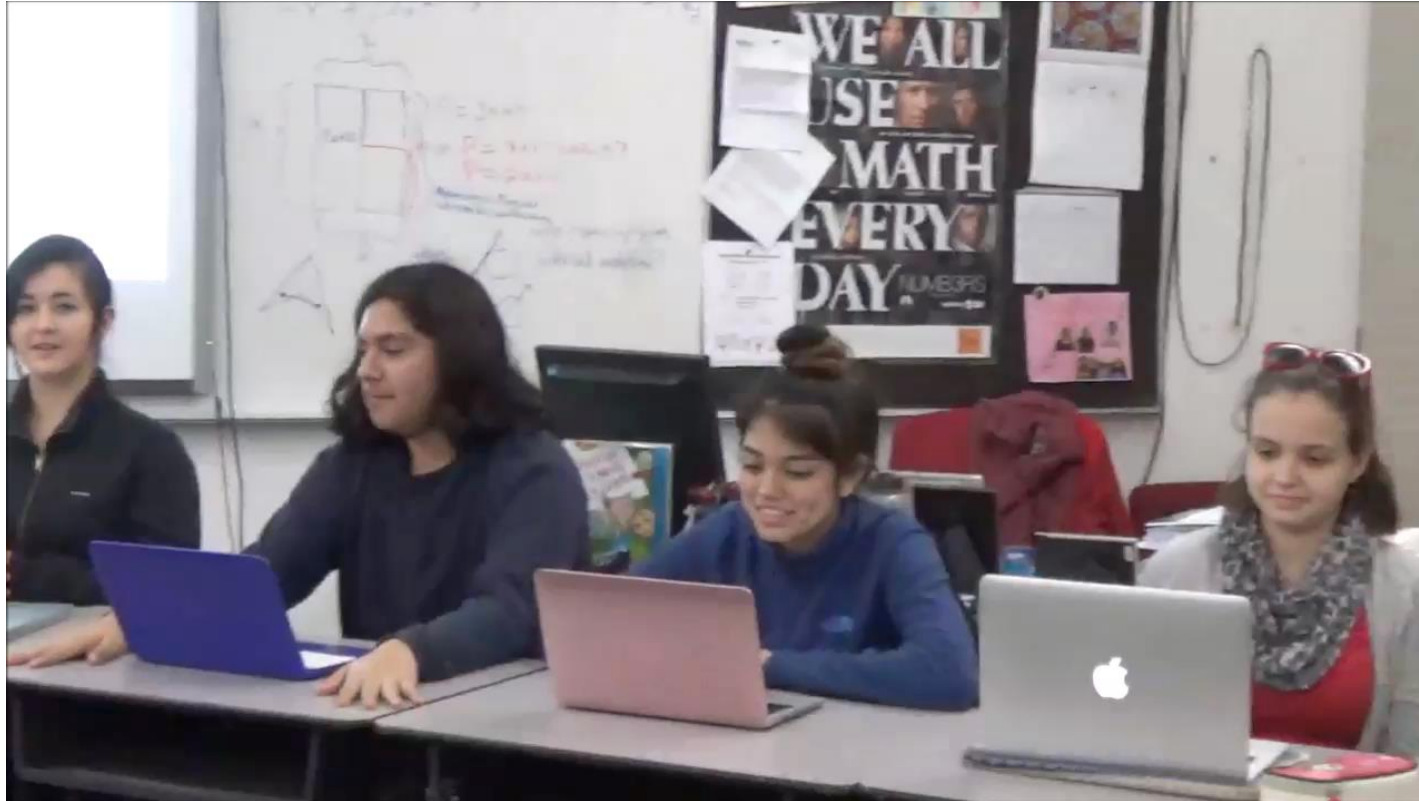
And more importantly, why debate in math class?

Students who are involved in discussions in which they justify solutions - especially in the face of disagreement - will gain better mathematical understanding as they work to convince their peers about differing points of view (Hatano and Inaki 1991).

-NCTM Principles and Standards for School Mathematics

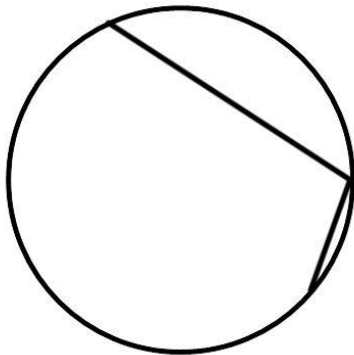
Algebra 1: Substitution vs. Elimination Debate

February, 2017

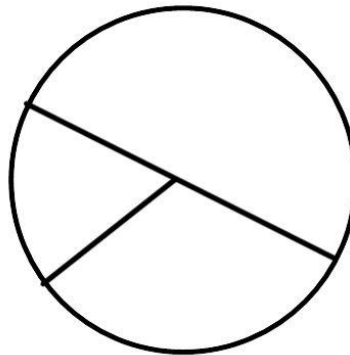


Which One Doesn't Belong?

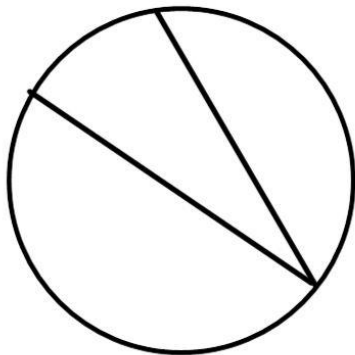
A



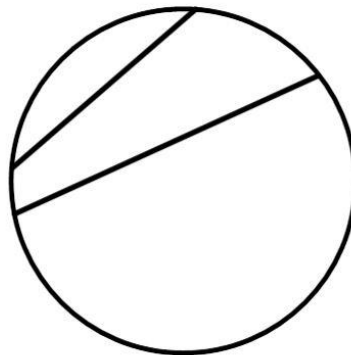
B



C



D

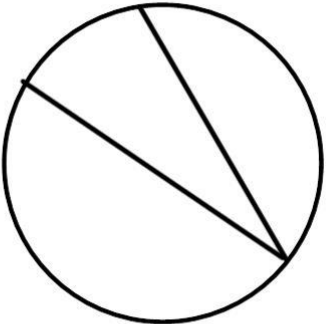


⑥

A MCK

+1
+2
+3

forms like when reflecting
only 1 to create scalene by giving
no acute angle segments.



C

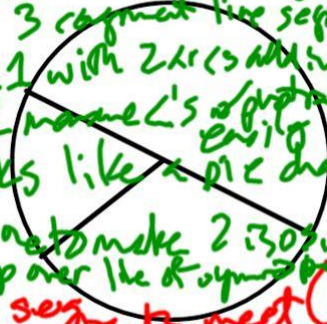
Which One Doesn't Belong?

⑮

B

QMD

makes 2 distinct angles
has 3 ray/line segments
only 1 with 2 rays adding to form
an acute angle's supplement
looks like a pie chart
all segments meet @ center
3 segments intersect in interior



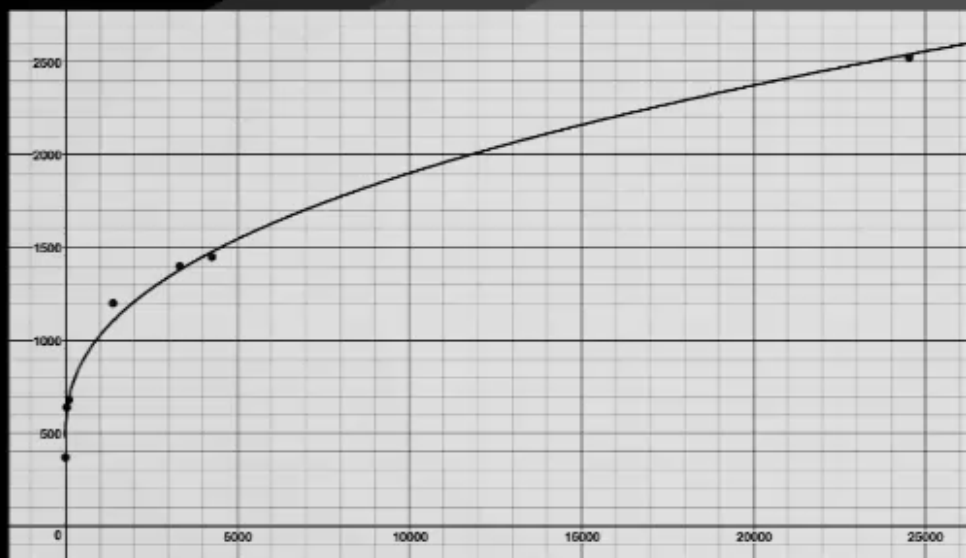
lines not in better half
completely inside
makes quadrilateral
chord with 1 ray segment
bounding > 1/2 circle
if segments extended intersect
4 separate rays
overlapping least 1
no chords intersect.
no angles



⑬

D

Pre-Calculus Debate 2



Discrete vs. Continuous Graphs
October 25, 2016



Developing Student Communication Skills

Debate Formats and Protocols

Round Robin Debate

Debate Pools

Corners Debate

Informal Debate

Formal Debate

Snake Debate

33%	$\frac{1}{3}$
$\frac{5}{3}$	$.6$

Reflection and Assessment

Debate Topic: **RADIANS VS. DEGREES**

Team A Position: **RADIANS ARE THE BEST WAY TO MEASURE ANGLES**

Team A Members: **SCOTT, ANGIE, FRANK, KRISTINA**

Category	Points Possible (Circle One)					
	0	1	2	3	4	5
Opening Statement					4	5
Key Arguments				3	4	5
Rebuttals					4	5
Stay on Topic					4	5
Public Speaking Skills					4	5
Closing Statement					4	5
Total (Sum of Points)	26					



What to debate?



Employee Ariana

32

75

38

42

47

68

51

51

58

31

51

65

Employee Brian

49

45

51

49

63

56

51

48

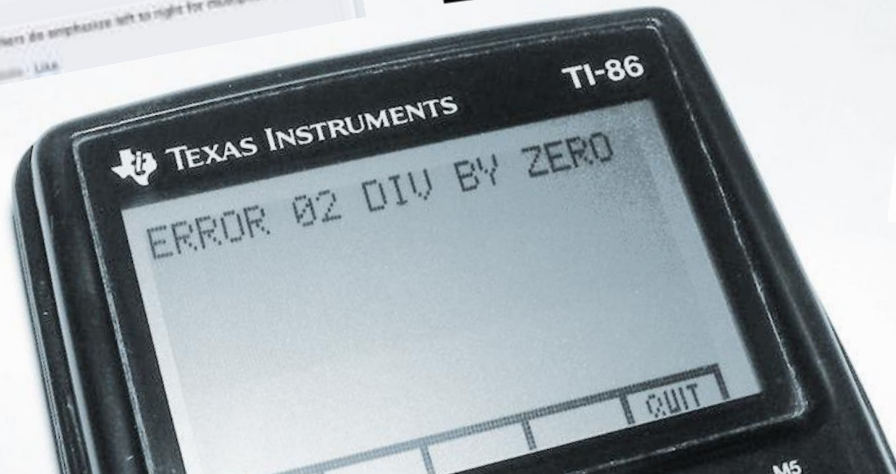
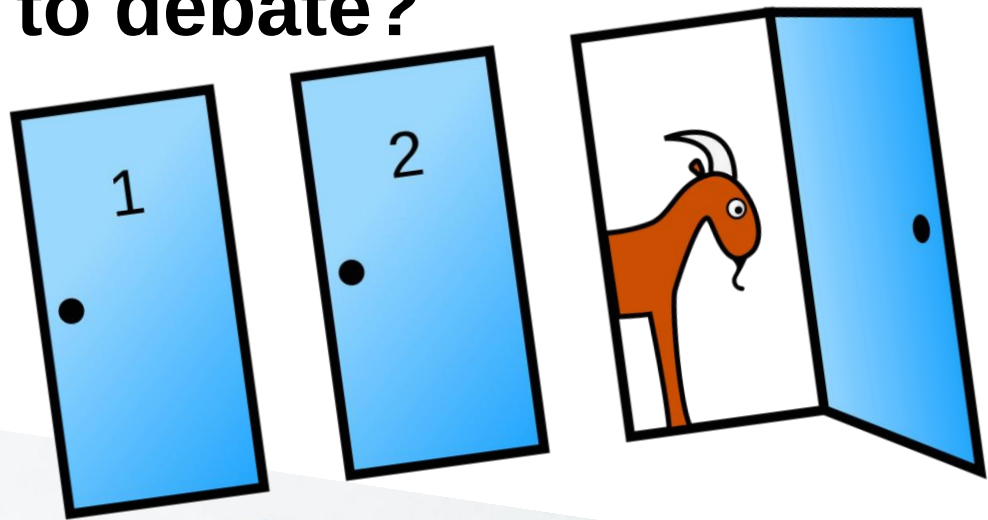
52

42

51

52

What to debate?



π vs τ

Resources

This presentation <http://bit.ly/cmcdebate2016>

Inside Mathematics [Problem of the Month](#)

[Scaffold considering both options](#) Sentence Starters

[Which One Doesn't Belong](#) (www.wodb.ca)

[Would You Rather?](#) (www.wouldyourathermath.com)

Debates Scoresheet <http://bit.ly/cmcdebate2016scorecard>

Debate Topics Spreadsheet <http://bit.ly/cmcdebate2016topics>

[NCTM Principles and Standards for School Mathematics](#)

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