IS TEST
A FOUR-LETTER WORD?

Teaching
*Math Anxious*
and
*Math Averse*
Students

KERRI WEBB
FYMSiC MAY 4, 2022
There are **10 kinds of people** in the world.

- Those who know binary
- and those who don’t

  - and those who want this joke to use ternary.
Is **test** a four-letter word?
- Yes.
- Not necessarily.
RECOGNIZE OUR BIASES

• **Past:** engineering, computer science, math (50-150+ students)
• **Now:** teachers, business, arts, environmental planning (15-70)
BINARY BIASES

math questions

good

poor

teaching math

empathetic

effective

tests?
Tests fit where we place them.
BIASES CHECK

assessment type

- test
- not test

teaching

- instructor
- counsellor

balance

sadness
NOT BINARY

assessment type
- length of time?
- collaborate?
- access to resources?
- contribution to grade?
- number of attempts?

teaching
- instructor
- counsellor
CAUSES OF MATH ANXIETY

• Personal Perception
• Others (instructors, peers, parents)
• Educational Environment
• Mathematics
Is test anxiety bad?

Anxiety connected to:
• desire to do well
• lack of preparation

It depends. (Not binary.)
WHAT I TEST

- essential skills
- deep questions
WHY I TEST

1) The *testing effect*
2) Equity
3) Fluency
4) Protection from forgetting
5) Diagnostic tool for instruction
6) Success leads to motivation
7) Less bias?
HOW I TEST
(for students)

- online, multiple attempts
- threshold/binary grading
- collaboration
- low stakes

- questions in advance
- students request a question
- multiple choice
- interleaving (protect forgetting)
HOW I TEST
(for me)

• “Give marks”
• Share “the why”
• Drop the lowest $x$ tests
• Due 5pm Fri, wknd extension always
• Automatic note in LMS for missed tests
There are many ways to be amazing math instructors. Let’s rethink our binary biases for teaching approaches.

Tests can support our students’ learning & allow them to attack deep problems.