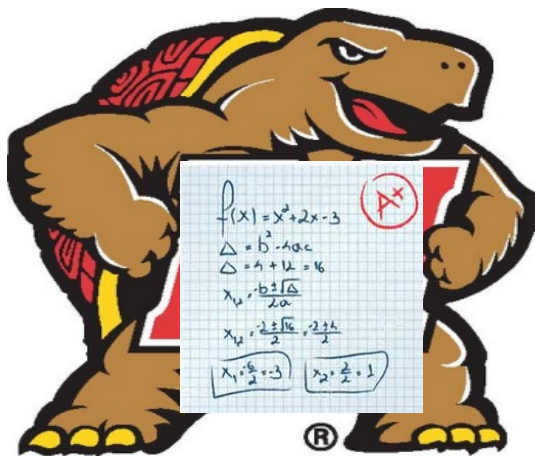




# The ABC's

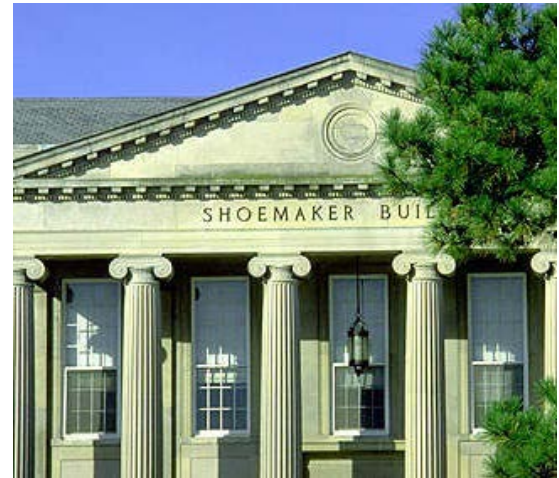
for Math Success





# Counseling Center

- Accessibility & Disability Service
- Counseling Service
- Research Unit
- Testing Unit



[www.counseling.umd.edu](http://www.counseling.umd.edu)

301.314.7651



# Workshop Objectives

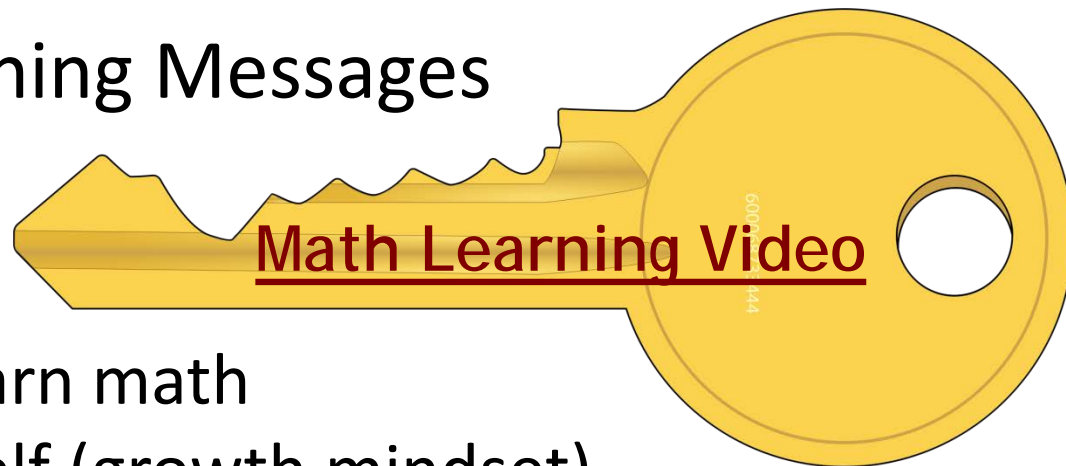
- To examine the affective, behavioral, and cognitive aspects of math learning.
- To offer strategies you can apply to improve your math learning.





# How do you feel about math? (**A**ffective)

## Four Key Math Learning Messages



- Everyone can learn math
- Believe in yourself (growth mindset)
- Struggle and mistakes are important for learning
- Speed is not important in math learning



# MATHITUDE

I HATE math/ I'm  
not good at it

I LOVE math/ I  
feel like I really  
understand it



# Quick Tip: Eliminate Negative Self Talk

## Instead of:

- I *hate* math!
- I can't do this problem!
- I'm going to fail this exam!

## Tell yourself:

- Math is a challenging subject, but I will try my best. I can improve my math skills with practice.
- I'm stuck. What can I do to figure this out? Do I have a similar example in my notes? Can I find one online? Can I get help somewhere on campus?
- I have practiced and I'm going to do my best.



# What do you do to learn math? (**B**ehavioral)

- Go to class!
- Complete assignments on time (following instructions from syllabus)
- Work smart, not hard:
  - ✓ make a study schedule
  - ✓ use effective study strategies
- Practice for your exams  
<http://www-math.umd.edu/testbank.html>
- Analyze your exams
- Know & use your resources





# Quick Tip: Don't Get **B**ehind

- Math learning is sequential!
- Look at upcoming lessons **b**efore class.
- Copy a friend's notes if you miss class.
- A strong grade on your first, "easiest," test can save your semester average.

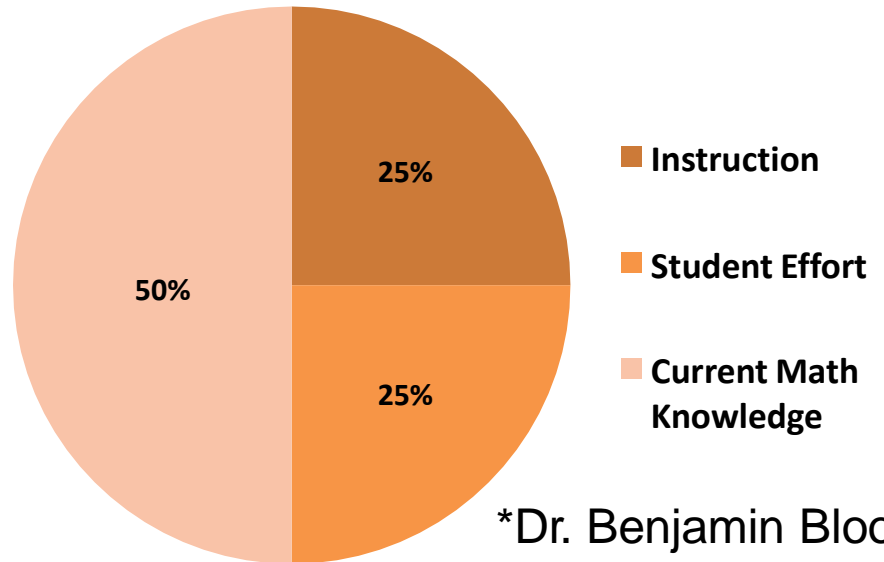






# What do you know about math? (Cognitive)

- Rote
- Understanding
- Analysis



\*Dr. Benjamin Bloom



# Quick Tip: Make a Cheat Sheet

## Include:

- Formulas
- Types of problems that will be on exam
- Example problems worked out
- Definitions
- Steps used to solve a problem
- Important rules to remember

## Probability

Events: any collection of possible outcomes. Set of all possible events: sample space

-event that can never occur: null event

*Intersection*:  $A \cap B$  "both A and B"

*Union*:  $A \cup B$  "either A or B, or both A & B"

*Complement*:  $A^C$  "not A"  $P(A^C) = 1 - P(A)$

Basic of probability formula:  $P(E) = m/n$

### • Commutative Law:

- $A \cup B = B \cup A$
- $A \cap B = B \cap A$

### • Associative Law:

- $(A \cup B) \cup C = A \cup (B \cup C)$
- $(A \cap B) \cap C = A \cap (B \cap C)$

### • Distributive Law:

- $A \cup (B \cap C) = (A \cup B) \cap (A \cup C)$
- $A \cap (B \cup C) = (A \cap B) \cup (A \cap C)$

**Question 1:** A die is rolled, find the probability that an even number is obtained.

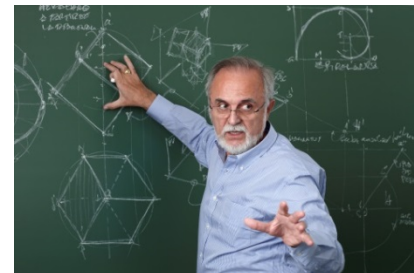
**Solution to Question 1:**

- First write the sample space (possible outcomes)  $S$  of the experiment.  
 $S = \{1, 2, 3, 4, 5, 6\}$
- Let  $E$  be the event (outcome) "an even number is obtained" and write it down.  
 $E = \{2, 4, 6\}$
- We now use the formula of the classical probability.

$$P(E) = m(E) / n(S) = 3 / 6 = 1 / 2$$



# Help Me Understand!

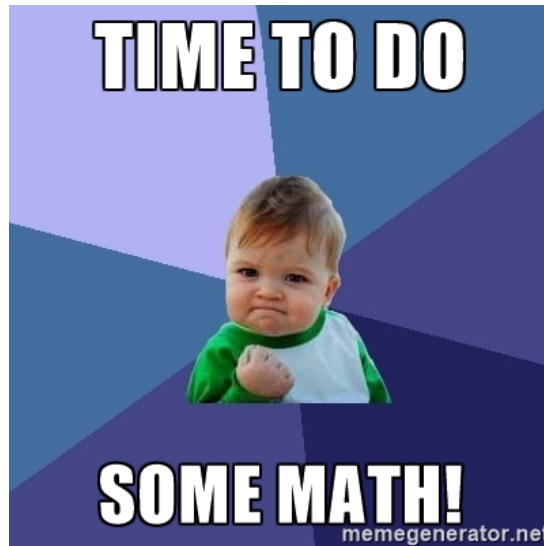


- Go to Professor's/TA's office hours or email them
- Math Department Tutoring (Math Building 0301)  
<http://www-math.umd.edu/math-tutoring-schedule.html>
- AAP Tutorial Services (Various Locations)  
[www.umdtutoring.mywconline.com](http://www.umdtutoring.mywconline.com)
- Math Success Program (Oakland Hall)  
[www.resnet.umd.edu/programs/math\\_success](http://www.resnet.umd.edu/programs/math_success)
- OMSE tutoring (Hornbake Library, South Wing)  
<http://www.omse.umd.edu/tutoring.html>





# What did you discover about Math Success?



Do you have any other questions?