"You try, you Fail. You try, you Fail.
You try, you Fail. But...
the REAL FAILURE is..
when you stop trying."

Fail Quickly, Fail Often, Learn to Solve Problems

By: Roger Osorio

Who am I?

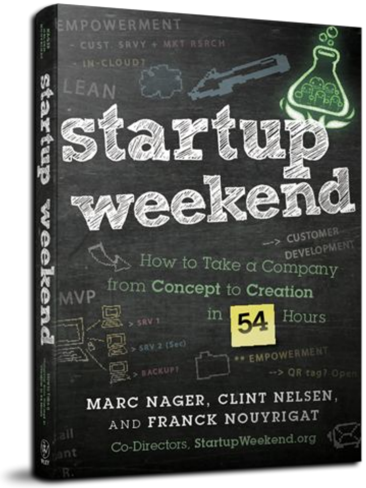
By day, I'm a **middle school math teacher** in New York City.

By night, I'm a **motivational speaker** on leadership development

By weekend, I'm a **national facilitator** for Startup Weekend, a weekend-long event where participants build businesses in 2 days.

At Startup Weekend Events...

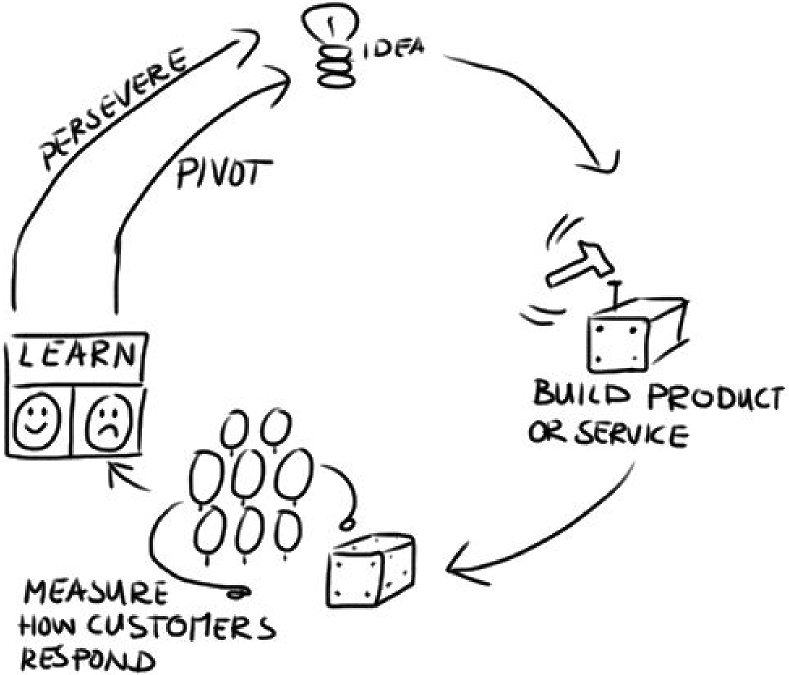
We help people take business ideas from concept to creation by leveraging a **process** that requires them to...



Fail Early,
Fail Fast,
Fail Often.

The Secret to Success at Startup Weekend

At Startup Weekend, I constantly preach that this is about...



This is no different in the classroom...

Separate knowledge from process, with the **emphasis on process**.

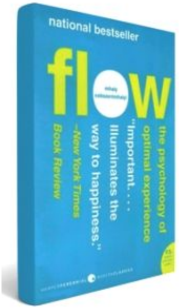
$$\frac{\textbf{Learning}\text{ (process)}}{\textbf{Grades}\text{ (outcomes)}}$$

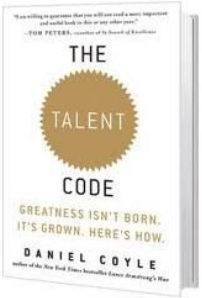
Learning Requires Failure

According to Daniel Coyle, we build talent by entering a state of **hyperfocus**. Mihalyi Csikszentmihalyi called this **flow** – a highly focused mental state.

Hyperfocus or flow puts a **spotlight on the our failures**.

Working through flaws that led to failure, we **improve** our **performance one correction at a time**. Without failure, there is no spotlight, without a spotlight, we cannot learn.





"MANY OF LIFE'S FAILURES ARE PEOPLE WHO DID NOT REALIZE HOW CLOSE THEY WERE TO SUCCESS WHEN THEY GAVE UP."

—THOMAS EDISON

My Best Failure in Math

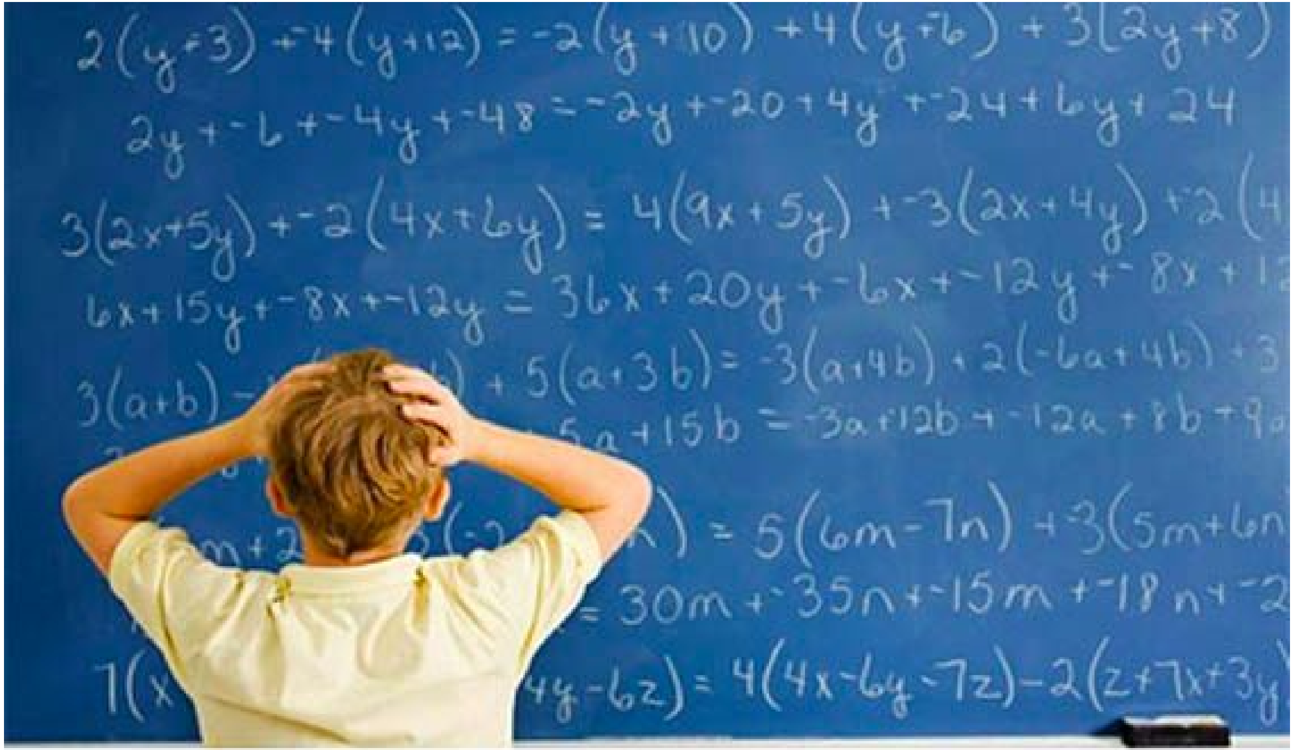
I once failed for 23 hours on a single math question, found countless ways not to solve it, and in the final hour I discovered the solution.

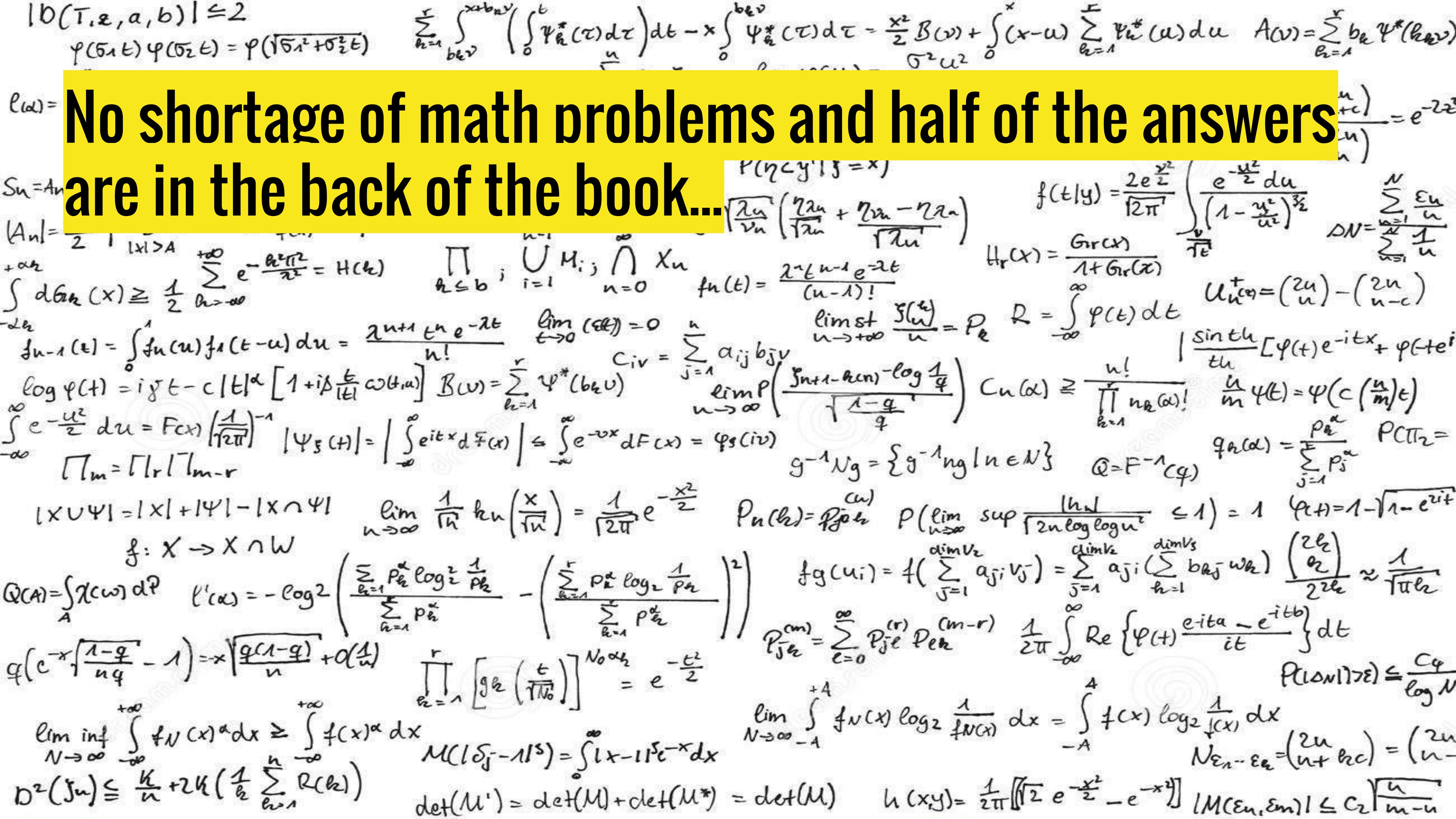
9 and 15 years later that lesson saved me from giving up too early.

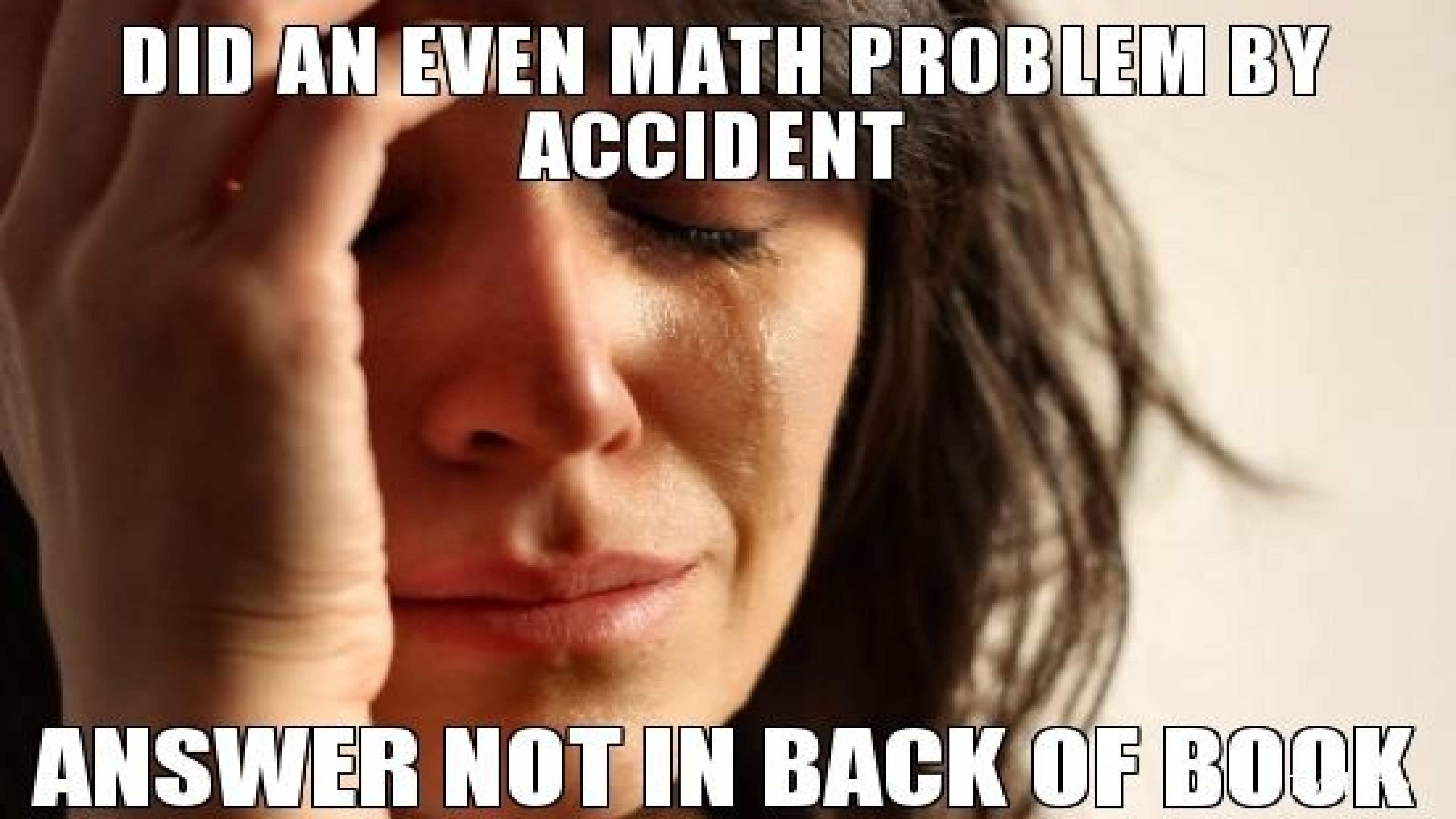
SUCCESS

Because you too can own this face of pure accomplishment

Math class is the best platform for teaching failure




No shortage of math problems and half of the answers are in the back of the book...


DID AN EVEN MATH PROBLEM BY ACCIDENT
ANSWER NOT IN BACK OF BOOK

Multi-step problems offer many possible directions

...you can spot your mistakes

...and we can build experience by testing different scenarios with the same question

$$-3(x-6)+4(x+1)=7x-10$$

$$-3x+18+4x+4=7x-10$$

$$\begin{array}{rcl} x+22 & = & 7x-10 \\ -7x\quad -22 & & -7x\quad -22 \\ \hline -6x & = & -32 \end{array}$$

$$-6x=-32$$

$$x=\frac{-32}{-6}=\frac{16}{3}$$

"FAILURE
IS SIMPLY AN
OPPORTUNITY TO
BEGIN AGAIN, THIS
TIME MORE
INTELLIGENTLY"

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$$-3(x-6)+4(x+1)=7x-10$$
$$-3x+18+4x+4=7x-10$$
$$x+22=7x-10$$
$$-7x\quad -22\quad -7x\quad -22$$
$$-6x=-32$$
$$-6x=-32$$
$$x=\frac{-32}{-6}=\frac{16}{3}$$

And confidence can build as quickly as the next question

So, what can you do to teach failure in your class?

1. Make failure a goal in your class (i.e. no fail, no learn).
2. Create a safe space for failure and encourage students to step out of their comfort zone.
3. Celebrate failure every chance you get (i.e. fist bumps, smiley faces).
4. Respond with “what do YOU think?” or “I don’t know, you tell me.”
5. Kick off a new unit with a question that no one knows the answer to.
6. Create “hyperfocus” time (i.e. 10 minutes of complete silence).
7. Model comfort with failure by admitting to your mistakes publicly.

So when will I ever need to know this?

Why do I need to learn math?

Thank you!

If I can be of any assistance, please reach out and/or connect with me:

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Mistakes are proof you are trying