

Empowering Students Who Ask “When Are We Ever Going To Use This Math?”

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Non-Traditional Background

- EE Student Study Groups
- Electronics Engineering & Marketing
- MBA
- Wall Street
- Mom
- Entrepreneur

See role as coach/motivator

Maximizing Human Potential through the study of Math

- Critical thinking
- Attention to detail
- Metacognition “Easy, Medium, Hard?”
- Making Connections (not learning in isolation)
- Interpreting and reading graphs
- Financial Independence
- Tools for Decision Making
- Keeping America Competitive

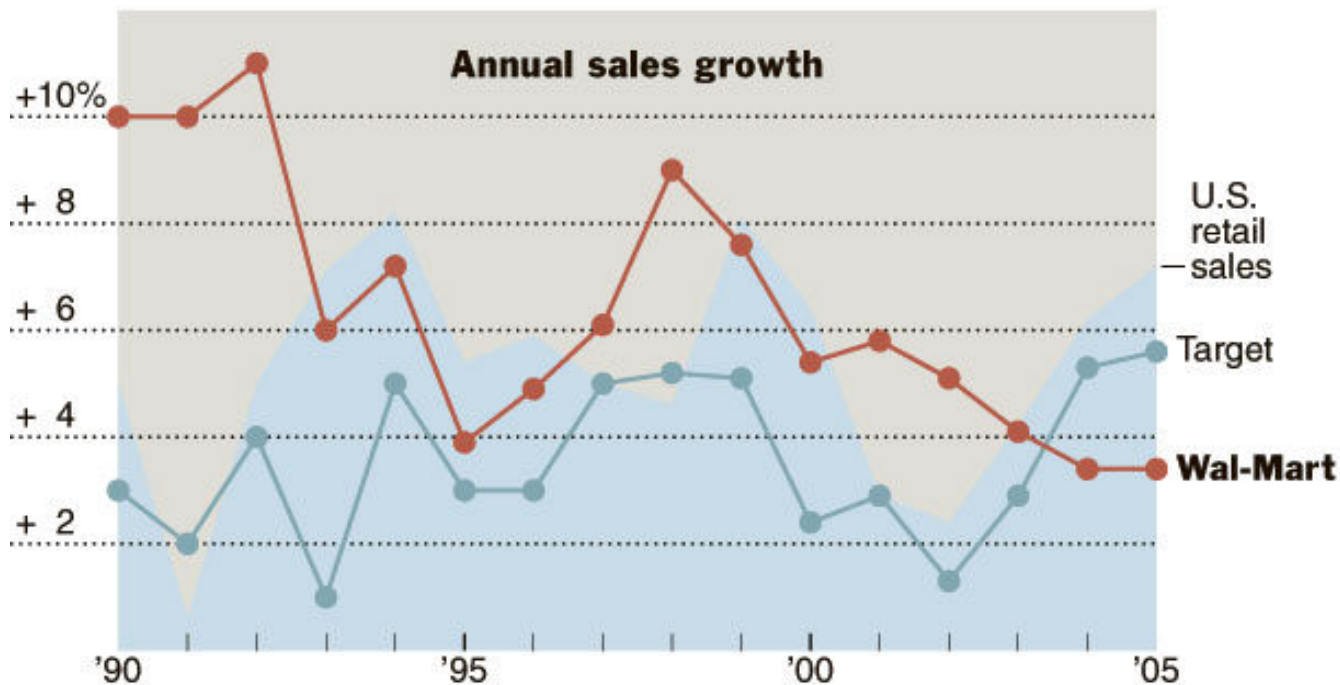


What is the trend for Wal-Mart?

Have sales increased or decreased?

Losing Its Edge

For years, Wal-Mart outpaced the general retail industry and its chief rival, Target. But it has faltered lately.



Note: Data are domestic comparable-store sales change for Target and Wal-Mart and annual change in total U.S. retail sales, including food services.

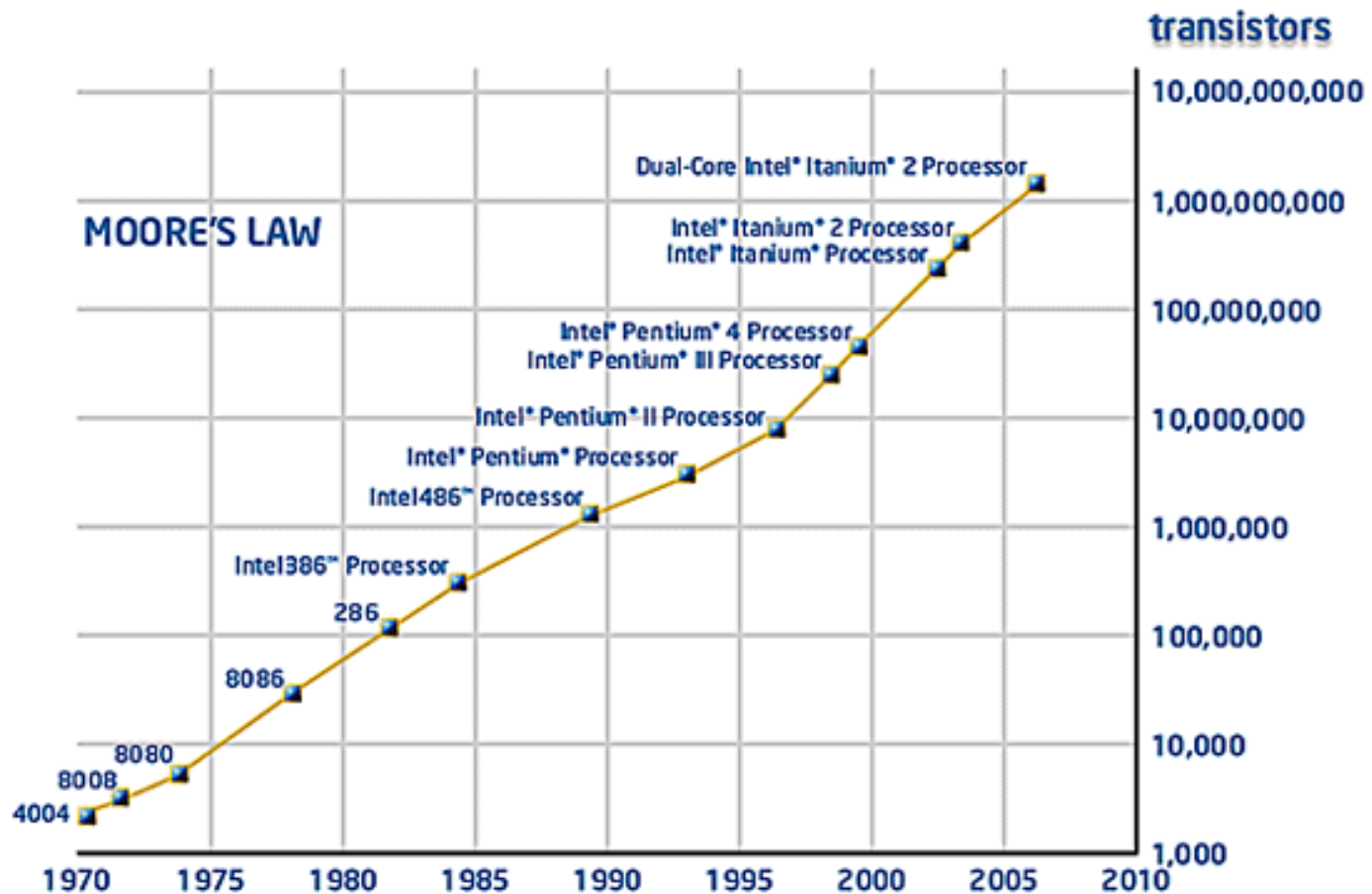
Building Useful Life Skills

- Expanding Career Choices
- Boosting Confidence
- Addressing the Psychology
- Forcing them to think!!!
- Stamina and persistence (“The Odyssey”)
- Media Literacy
- Value as an employee



Moore's Law (Intel)

Does the relationship appear to be linear?



Moore's Law Means More Performance. Processing power, measured in millions of instructions per second (MIPS), has steadily risen because of increased transistor counts.

The Law of the Farm

- Stephen Covey's First Things First book
- In undergraduate, a degree but not an education
- In grad school, an ulcer!



Multiple Choice Testing as an Opportunity

- The strength of the comparative
- The problem is that the student sees the good wrong answer and falls for it and has no idea that he/she has been had
- Non-traditional methods (encompassing more than an 'Aim for the Day')



Teaching with 'Good Wrong Answers'

- Showing students 'the right way' can be complemented with GWA
- GWA are designed with common mistakes and misunderstandings in mind
- They are fun ;)
- The answer is there!!



$$(x+3)^2 - (x+2)^2 =$$

A) 13

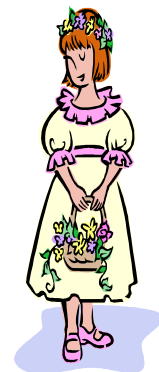
B) 5

C) $2x + 5$

D) $10x + 13$

E) $10x + 5$

**The Middle Term
The Lonely Girl
at the Dance**



Quantitative Comparison

A if A is always larger

B if B is always larger

C if A and B are always equal

D not enough info

A

$$\frac{x + 3}{x + 6}$$

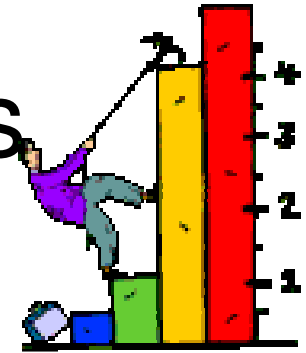
$$x$$

B

$$\frac{1}{2}$$

$$x^2$$

Engineering school builds perspective



- Exam averages of ___ but you just hang in there!!
- Builds humility, teamwork, resilience, problem-solving and frustration tolerance
- Studying in groups outside of class
- D is for diploma

“When Are We Ever Going To Use This Math?”

- Stronger and more marketable skill set
- Quicker mind
- May translate into Higher Test Performance
- Productive/knowledgeable citizens
- Maximizing Opportunity and Economic Potential
- Work ethic / perseverance
- Decision making re: housing, retirement, medical issues
- Wider range of college majors