

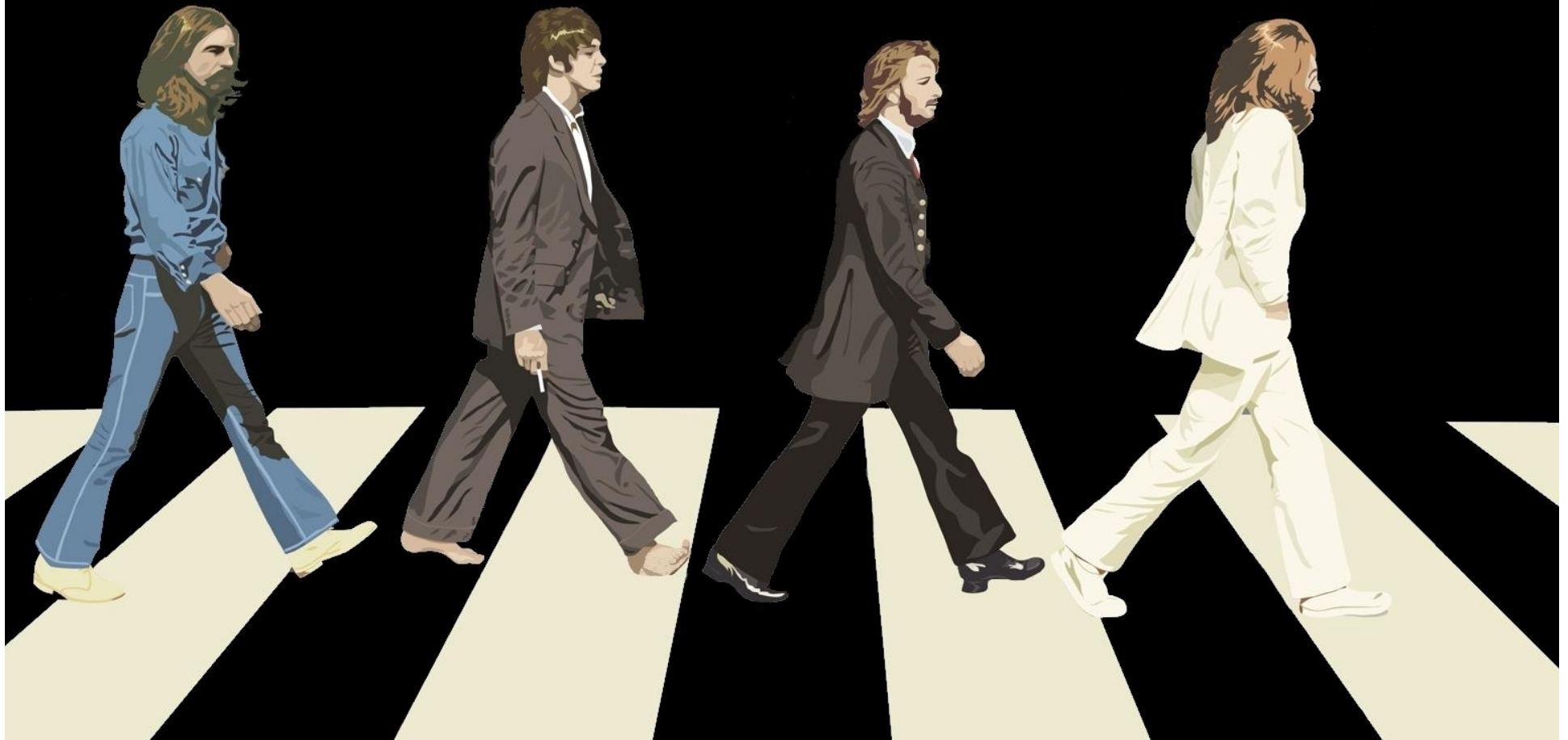
Key to mastery in any field,  
to a large extent, is a matter  
of practicing a specific  
activity for a total of around  
10,000 hours.

# 10,000-Hour Rule



1,200 times 1960 - 1964

**10,000 hours**





# Age 13

**10,000** hours of programming

**10,000 HOURS  
OF  
MATHEMATICS**

**Mastery Requires Enormous Time**

---

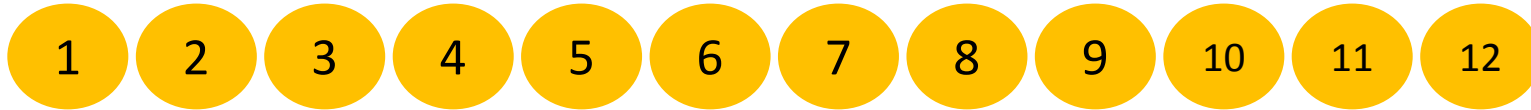
**10,000 Hours**

**20 hours every week for 10 years**

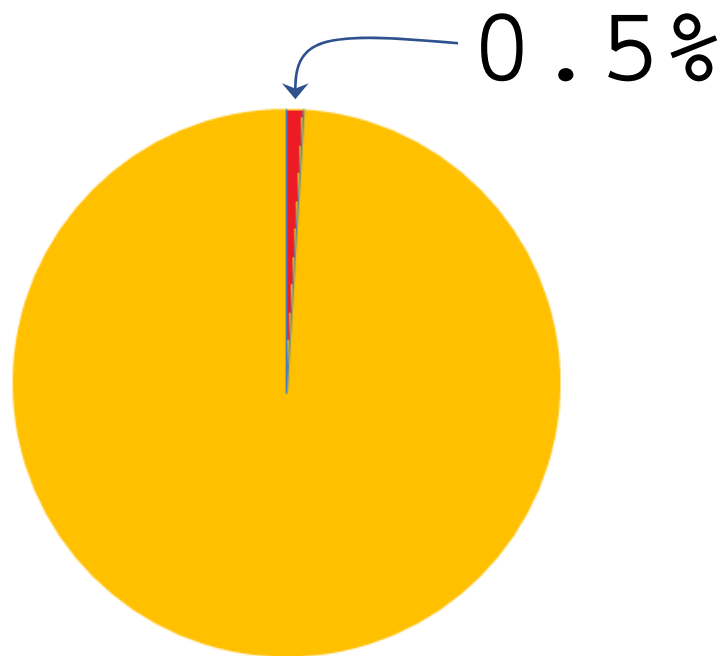


# K-12

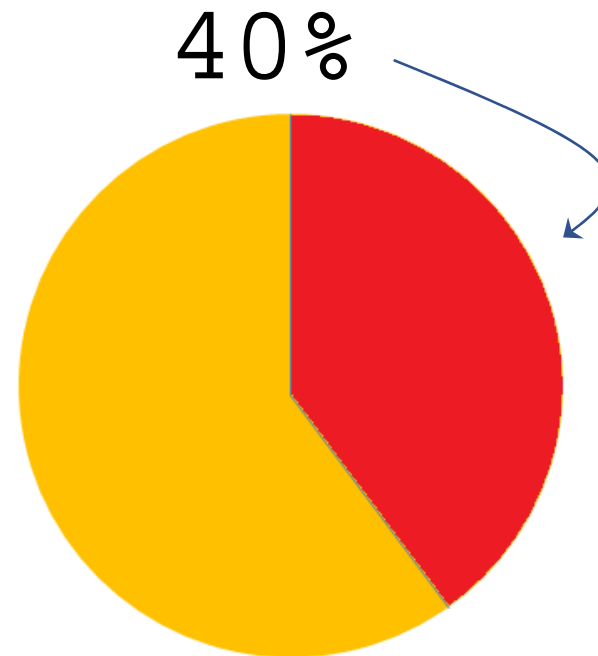
**20 hours every week for 10 years**



# K-12



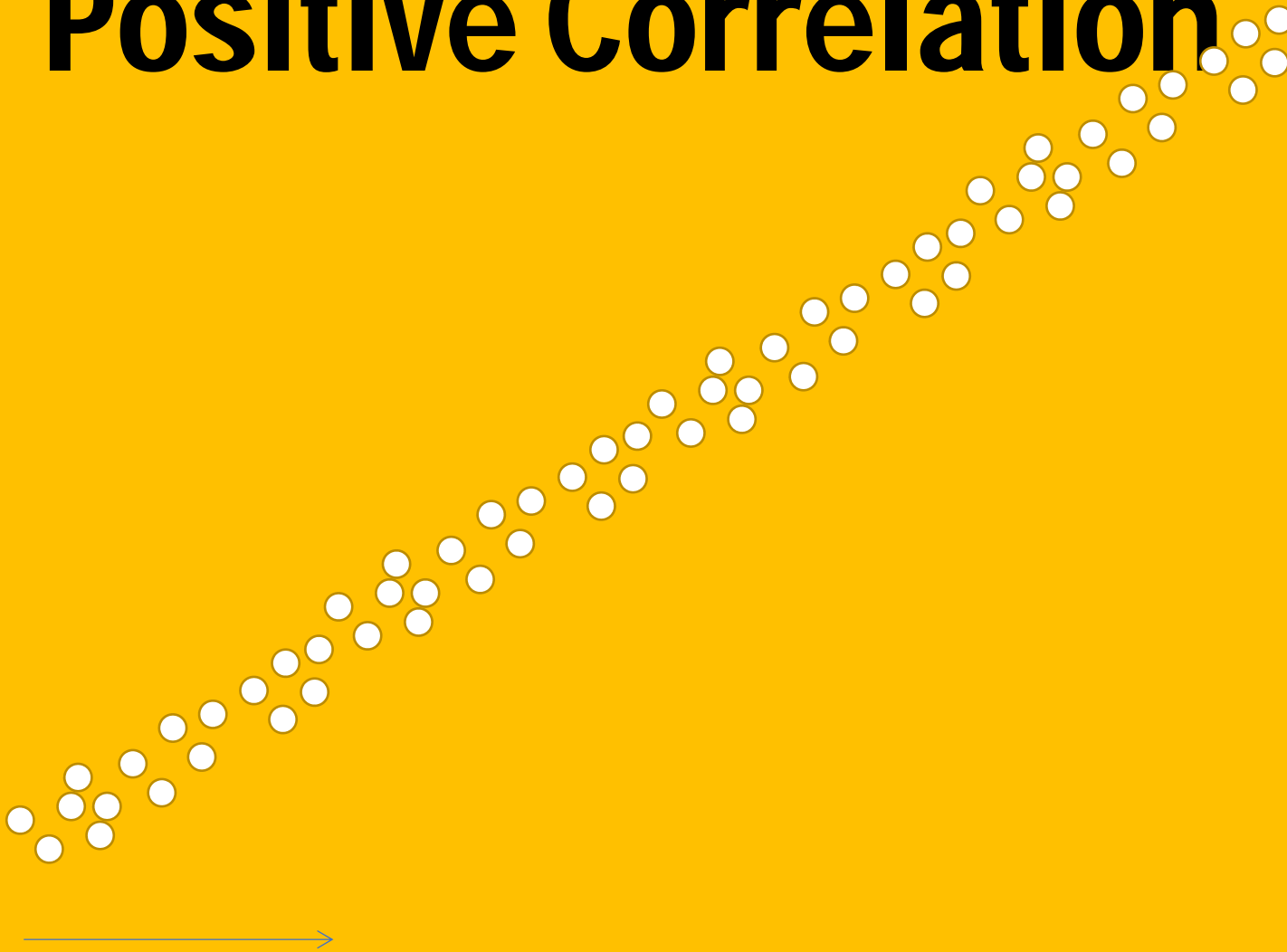
**Specialize in  
Mathematics**



**Professional Users of  
Mathematics**

# Positive Correlation

Success



Time Spent in Educationally Rich Environments



2010

# ASSESSMENT FOR LEARNING



## BLENDED MASTERY-BASED LEARNING



**MATH FOR**  
BUSINESS &  
FINANCE

**MATH FOR**  
PRE-TECH &  
PRE-HEALTH

**MATH FOR**  
PRE-BUSINESS,  
TOURISM & HOSPITALITY

**MATH FOR**  
HEALTH SCIENCE

**MATH FOR**  
TECHNOLOGY

**MATH**  
DIAGNOSTIC  
&  
UPGRADING

**STATS FOR**  
HEALTH SCIENCE

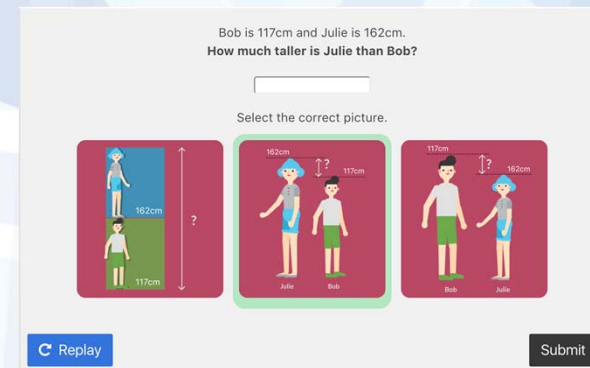
**STATS FOR**  
BUSINESS

# ASSESSMENT FOR LEARNING

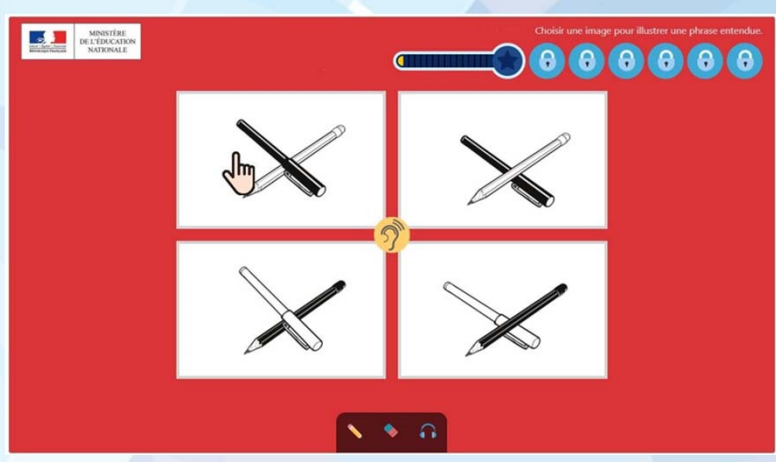
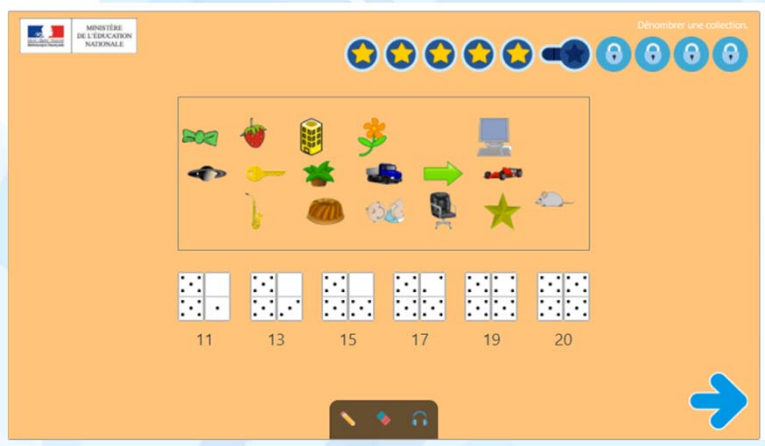
2015



## PERSONALIZED LEARNING ENVIRONMENT



$$\begin{aligned}\text{Pront} &= 2 \cdot 18 - 20 \\ &= 2 \cdot 18 - 20 \\ &= 16\end{aligned}$$



# OFFLINE ENVIRONMENT





# INTERNATIONAL RECOGNITION



**GOLD**  
BEST ADVANCE IN  
CUSTOM CONTENT

For raising attainment  
in mathematics



**GOLD**  
BEST ADVANCE IN  
COMPETENCIES AND  
SKILLS DEVELOPMENT

For raising the level of  
numeracy and student success

INTERNATIONAL  
EDUCATIONAL  
GAMES COMPETITION

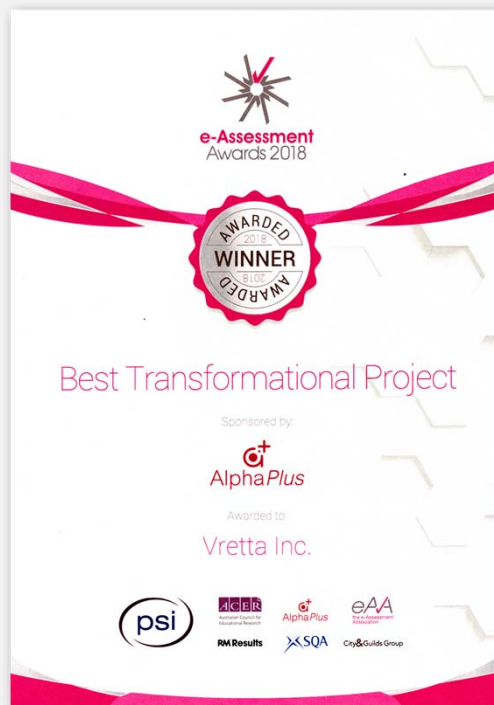


**WINNER**  
APP BASED GAMES

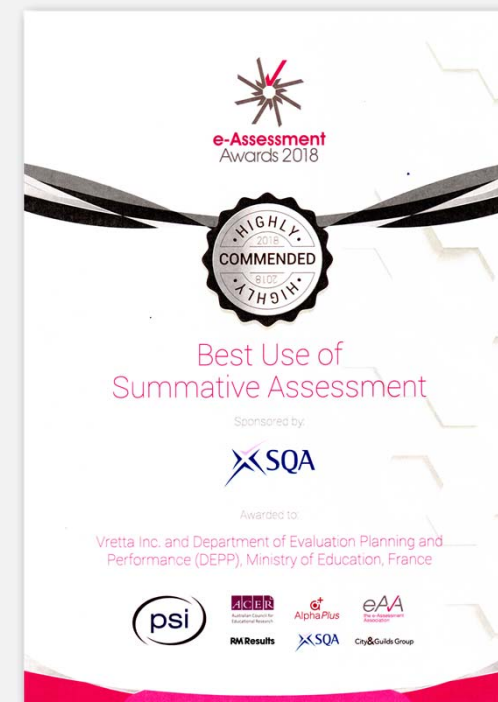
# INTERNATIONAL RECOGNITION



**WINNER**  
**BEST USE OF FORMATIVE  
ASSESSMENT**



**WINNER**  
**BEST TRANSFORMATIONAL  
PROJECT**



**HIGHLY COMMENDED**  
**BEST USE OF SUMMATIVE  
ASSESSMENT**

# INTERNATIONAL RECOGNITION



**WINNER**  
**BEST USE OF FORMATIVE  
ASSESSMENT**

# 10,000 HOURS OF MATHEMATICS

RICH ENVIRONMENT





2018



# Vretta

**AFFORDABLE + FLEXIBLE + ENGAGING**  
**= HAPPY (STUDENTS + TEACHERS)**





## CONTENT LICENSES

Distribute, Tweak, & Build upon Work,  
even Commercially.

Attribution

Attribution ShareAlike

Attribution-NoDerivs

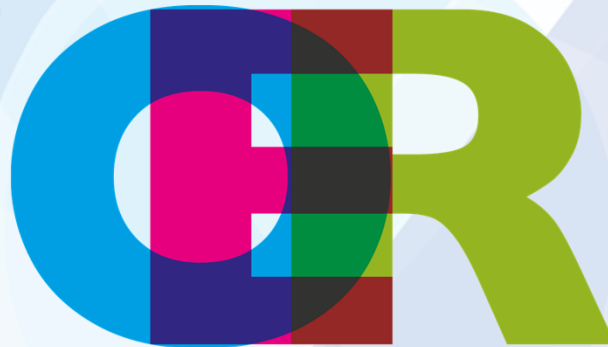
Attribution-NonCommercial

Attribution-NonCommercial-ShareAlike

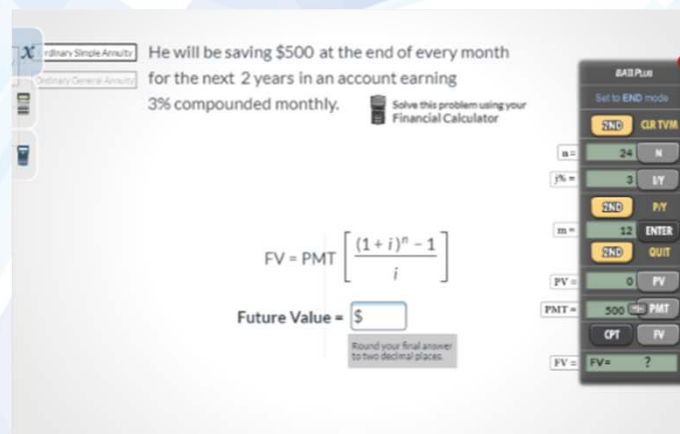
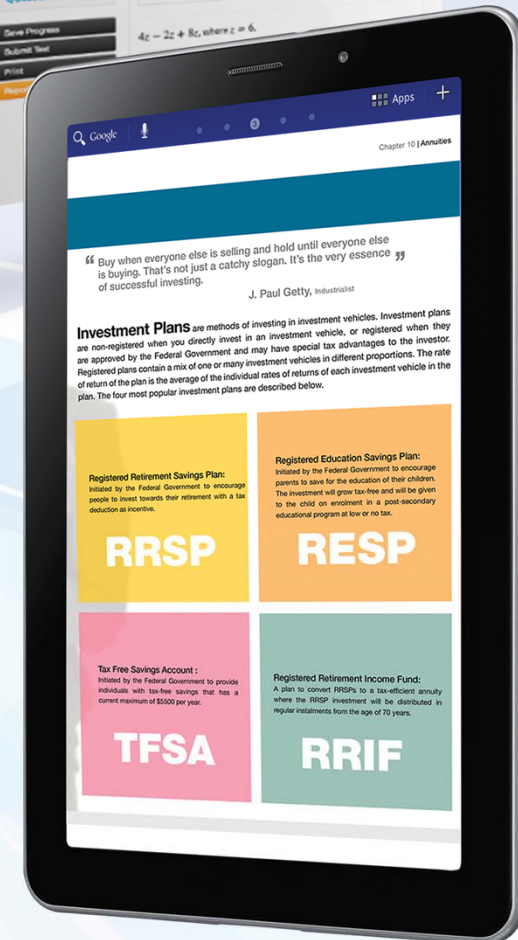
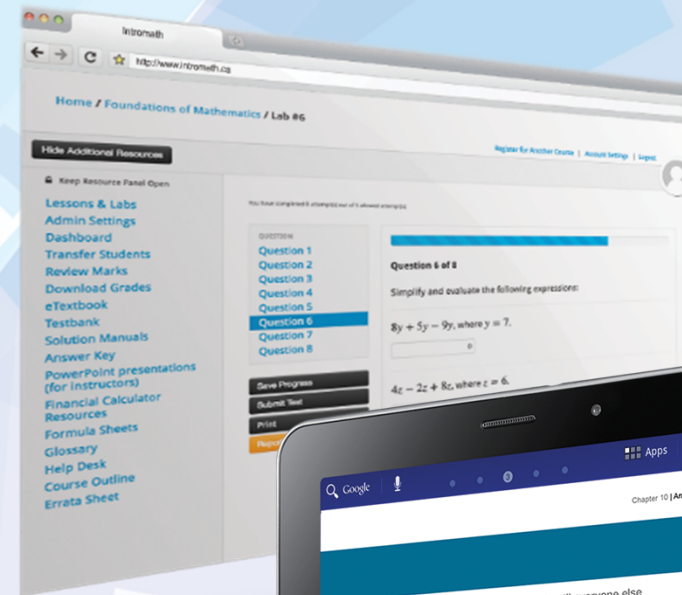
Attribution-NonCommercial-NoDerivs



2018



## OPEN EDUCATIONAL RESOURCES



**Pre-  
alg-  
ebra**

Elementary

**Alg-  
ebra**

Intermediate

**Alg-  
ebra**

**Alg-  
ebra**  
and **Trig-  
onom-  
etry**

**Pre-  
calc-  
ulus**

**Calc-  
ulus**

Volume 1

**Calc-  
ulus**

Volume 2

**Calc-  
ulus**

Volume 3

Introductory

**Stat-  
istics**

Introductory Business

**Stat-  
istics**



**Vretta**



**FLIP+ PARTNERSHIP**





10 years

# TECHNOLOGY ENHANCED ITEMS

SHARING KNOWLEDGE AND EXPERIENCES

SHARING DEVELOPMENT COSTS AND CONTENT

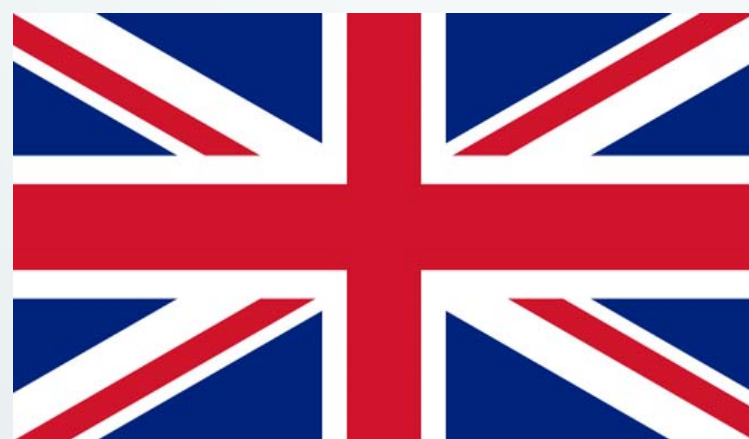


**COLLEGES**  
**UNIVERSITIES**  
**EXAMINATION BODIES**  
**RESEARCH INSTITUTIONS**  
**MINISTRIES OF EDUCATION**  
**TRAINING CENTRES**

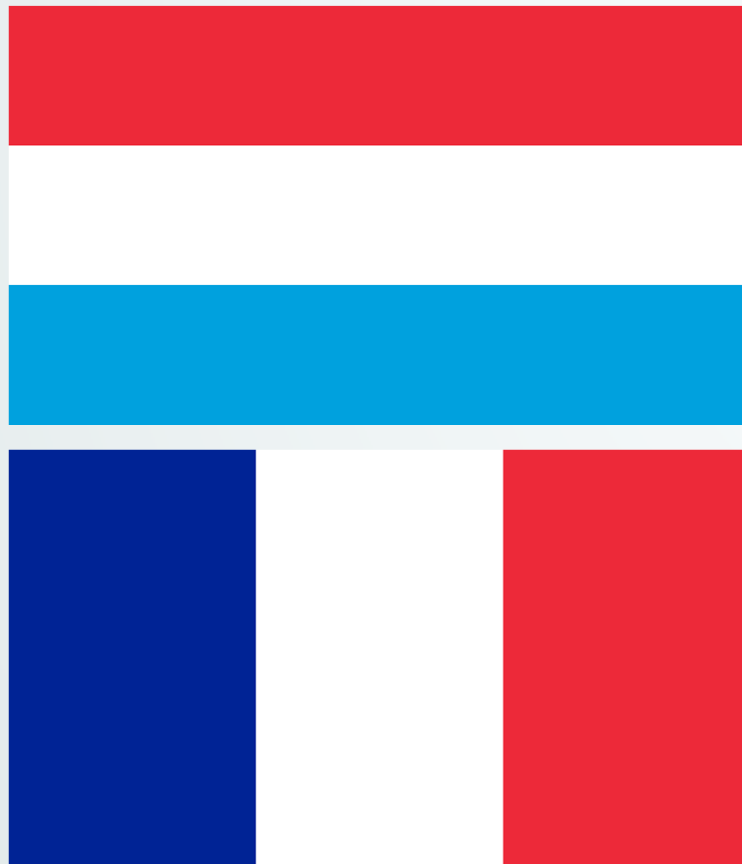
# SHARING KNOWLEDGE AND EXPERIENCES



# SHARING DEVELOPMENT COSTS AND CONTENT



EXCHANGE



# YOU'RE INVITED

LEARN MORE ABOUT  
WHAT WE DO

SEE HOW WE CAN  
COLLABORATE  
AND SHARE



# **10,000 HOURS OF MATHEMATICS**

**RICH ENVIRONMENT**

**Grazie Mille**