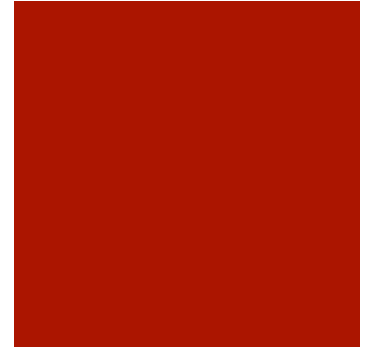


Errors as Opportunities: Go Numberless

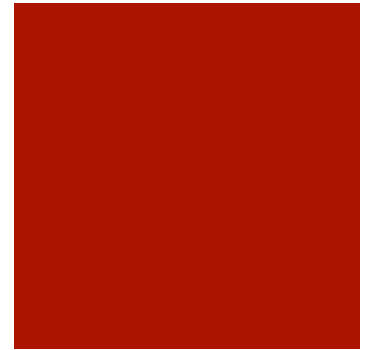


Jamal ran 10 miles on Monday and 5 miles on Tuesday. Denise ran 12 miles on Wednesday and 7 miles on Thursday. How many more miles total did Denise run than Jamal?

$$\begin{array}{r} 10 \\ + 5 \\ \hline 15 \\ 12 \\ + 7 \\ \hline 34 \end{array}$$

- 34
- 4
- 12
- 7

Errors as Opportunities: Go Numberless



Natasha had \$8.72. She spent \$4.89 on a gift for her mother. How much money does Natasha have left?

$$\begin{array}{r} 8 \\ -4 \\ \hline 4 \end{array}$$

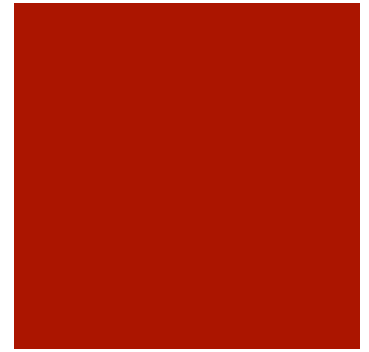
$$\begin{array}{r} 872 \\ -489 \\ \hline 383 \end{array}$$

$$\begin{array}{r} 872 \\ -489 \\ \hline 383 \end{array}$$

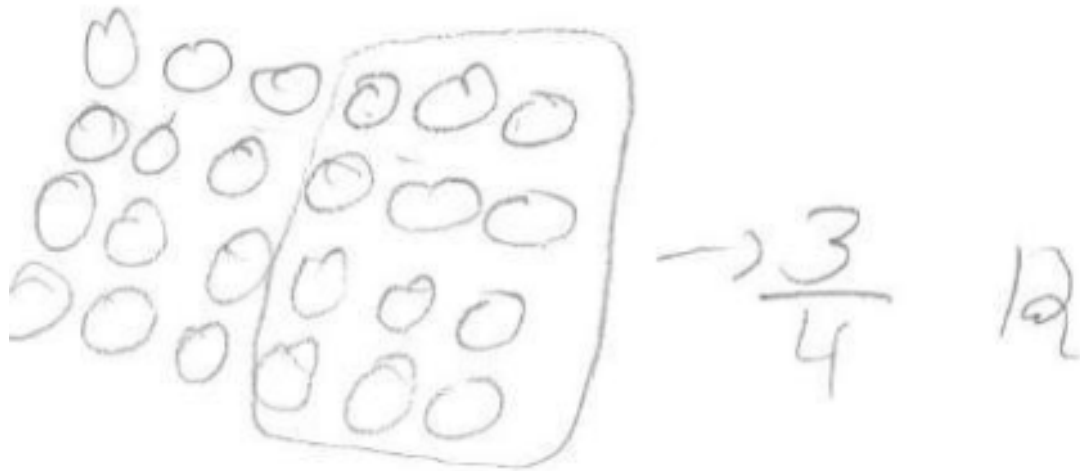
$$\boxed{288}$$

$$\begin{array}{r} 872 \\ -489 \\ \hline 383 \end{array}$$

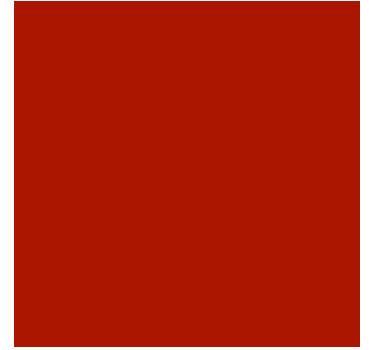
Errors as Opportunities: **Alternate Points of Entry**



1. Ruby has a collection of 24 toy cars. She gives $\frac{3}{4}$ of her collection to Ethan. How many toy cars does Ethan get?



Errors as Opportunities: Alternate Points of Entry



Story Time

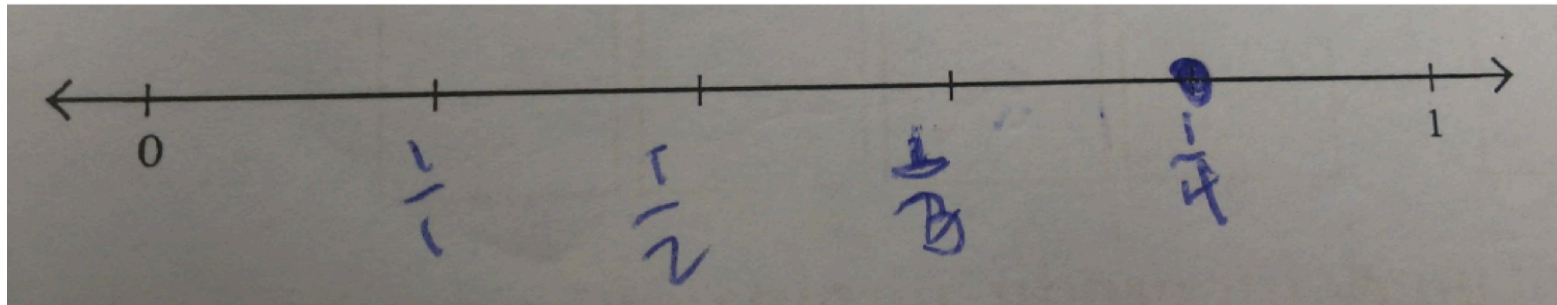
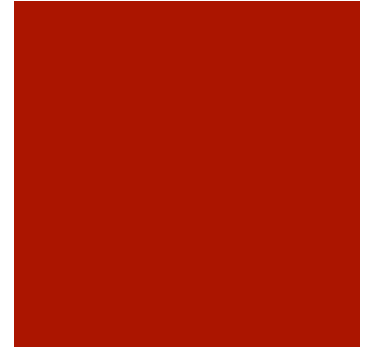
Month	Number of Children
January	25
February	29
March	33
April	37
May	?

The pattern in the table continues.

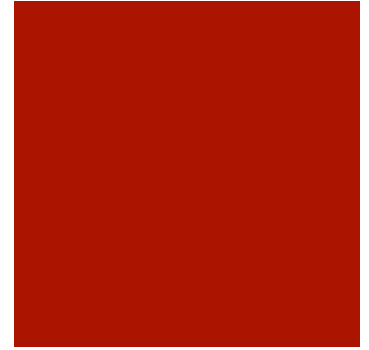
How many children will go to story time in May?

39

Errors as Opportunities: **Deliberate Practice**



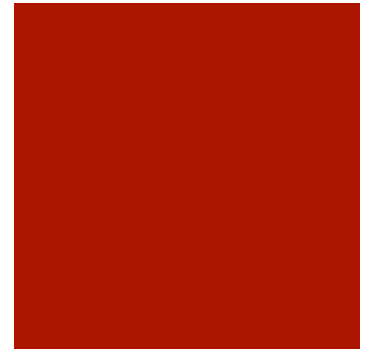
Errors as Opportunities: **Deliberate Practice**



2 people each person has 13 eye-brows

how many eye brows are
there

Errors as Opportunities: **Analyze It**



A. $\frac{1}{2} = \frac{1}{4}$
 $\frac{1}{4} = \frac{1}{4}$

 $\frac{2}{4}$

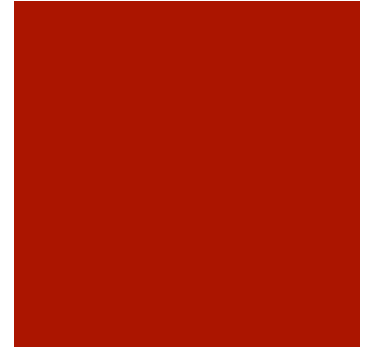
B. $\frac{2}{5} = \frac{2}{10}$
 $\frac{1}{2} = \frac{1}{10}$

 $\frac{3}{10}$

C. $\frac{3}{5} = \frac{3}{15}$
 $\frac{1}{3} = \frac{1}{15}$

 $\frac{4}{15}$

Analyze It: My Favorite No



Inspired

Things Teachers Can Do

- #1 Teachers need to **carefully select tasks** that require students to struggle and provide the support that students need without diminishing the cognitive demand of the task or giving students too much help.



Things Teachers Can Do

- #2 Students need **sufficient time**, not only to solve difficult mathematical problems, but also to “develop genuine curiosity and stamina.”



Things Teachers Can Do

- #3 Finally, teachers must **create a classroom culture** that demonstrates “**struggle** as a natural part of the learning process” and allows students to see the potential in persevering.



Errors as Opportunities

- Be Specific
- Go Numberless
- Points of Entry
- Deliberate Practice
- Analyze It



SUCCESS



WHAT PEOPLE
THINK IT
LOOKS LIKE

SUCCESS



WHAT IT
REALLY LOOKS
LIKE



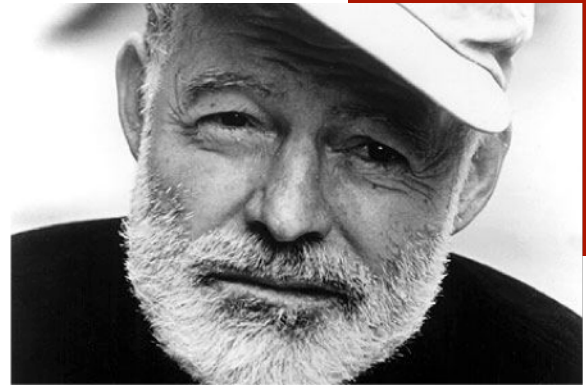
JK Rowling

It is impossible to live without failing at something, unless you live so cautiously that you might as well not have lived at all - in which case, you fail by default.



Ernest Hemingway

- The world breaks everyone and afterward many are strong in the broken places.





**MISTAKES
HAVE THE
POWER TO
TURN YOU
INTO
SOMETHING
BETTER THAN
YOU WERE
BEFORE.**

KUSHANDWIZDOM



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Thank You

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