

Differentiation

Meeting the Needs of All Learners

Grades 6–8

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What is Differentiation?

Which statement describes you?

- My partner and I defined differentiation exactly the same
- My partner and I had some similar and some different ideas about differentiation
- My partner and I defined differentiation very differently

Differentiation is instruction designed
to meet differing learners' needs
AND
is a lens through which we can
examine our teaching and our
student's learning.

We need to develop new skills and be more adept at:

- **Identifying** the important mathematics
- **Assessing** what students know and how they learn
- **Creating, designing and modifying** tasks
- **Providing** the opportunity for student choice

Focus Categories:

- Casting a Wider Net
- Scaffolding Learning
- Supporting Choice

Casting a Wider Net



Transforming Tasks

When we expand tasks to allow access we do not want to undermine the integrity of the mathematical challenge.

Number Story:

Sabina and Mike ran each day this week. Each day Sabina ran 3.5 miles in 28 minutes. Mike ran 6 miles in 63 minutes every day.

Here are the answers: 35, 2.5, 245, 7.35

What could be the questions?

If I were...

I would be...

I would be...

But I would not be...

Because that would be...

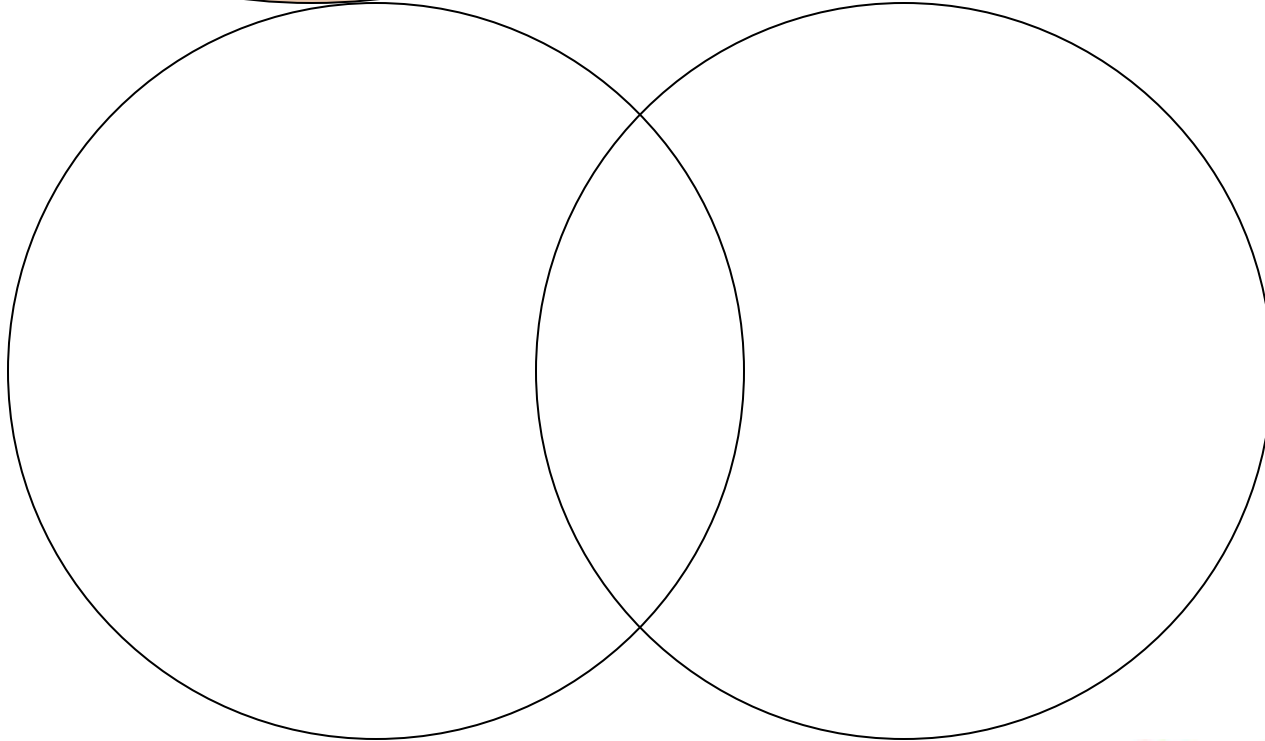
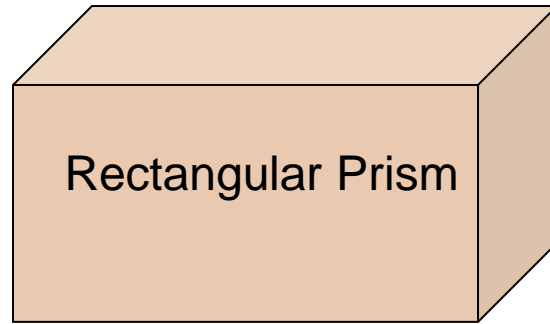
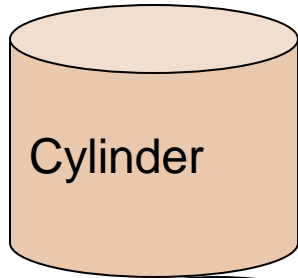
Fraction Division

- Pick 5 examples whose quotient is less than 2 and explain how you know.
- Pick one of the problems and write 4 different fraction division problems with the same quotient.



A family has 5 members. The mean age is 26.

How old could the family members be?



How are $y=2x$ and $y=x^2$ the same? How are they different?

Alike	Different

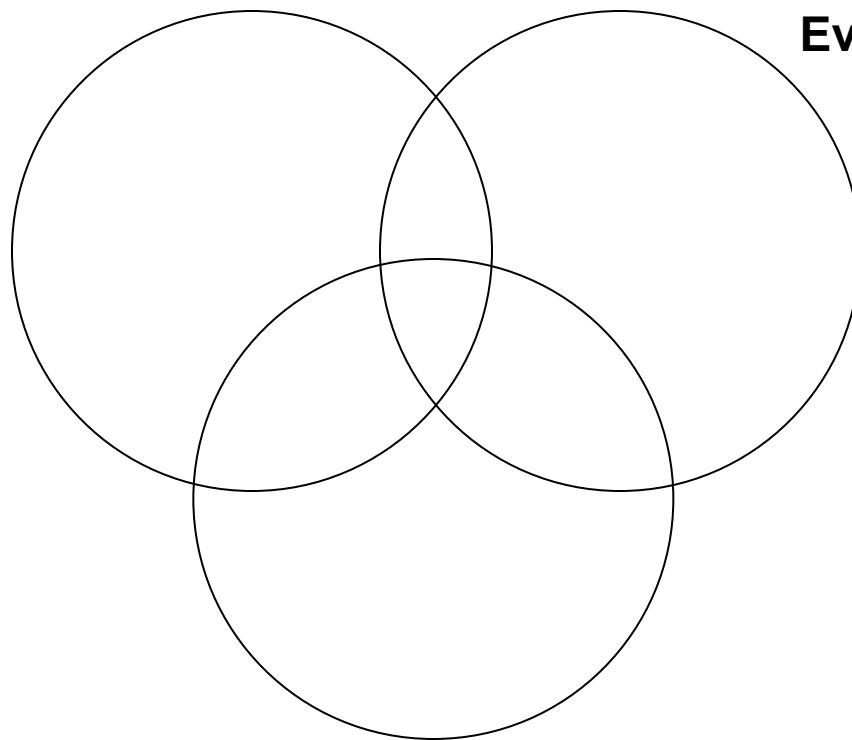
Word Bank

Coefficient, rate of change, slope, linear, non-linear, y-intercept, quadratic, exponent, y-axis, x-axis

Place the numbers 1–24 in the Venn Diagram

Multiples of 3

Even Numbers



Factors of 18

Supporting Choice

- Partners
- Work space
- Tasks
- Demonstrate understanding

Choose your numbers

There are _____ cups of milk in the refrigerator. $4 \frac{1}{2}$, $3 \frac{2}{3}$, $2 \frac{1}{4}$

It takes _____ of a cup to make frosting for one brownie recipe. $\frac{3}{4}$, $\frac{2}{3}$

How many batches of brownies can be frosted?

Choose your numbers

The price of basketball shoes are \$ _____

They are marked down _____%

What is the sale price?

Demonstrate Understanding

A Walking Race

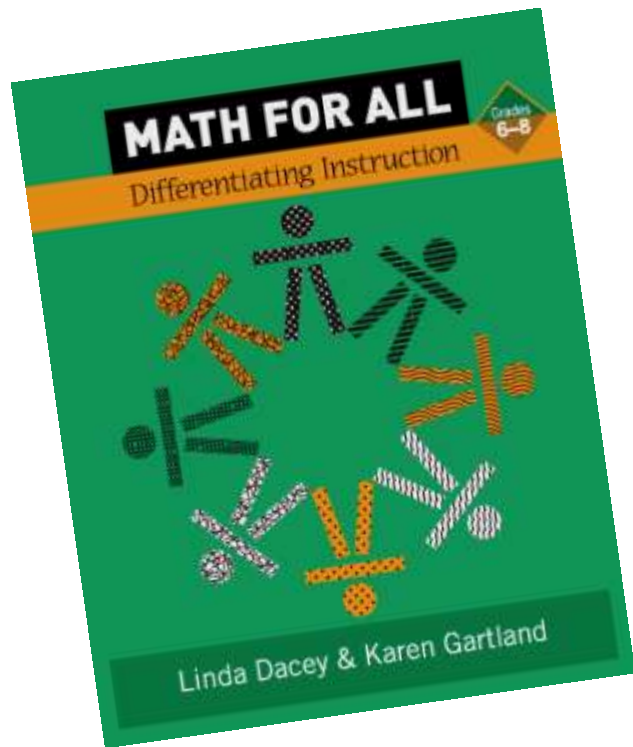
- Zoe walks at rate of 1 meter per second.
- Darnell's rate is 2.5 meters per second.

Design a race that Zoe will win, however, only by a little bit.

Things To Think About

- Identify where you already differentiate
- Recognize where you are on the journey
- Start small
- Keep the vision





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