Using Eureka Math to REACH Our Most Advanced Learners

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Dave Beedy

ELMHURST
COMMUNITY UNIT SCHOOL DISTRICT 205
A National Leader in Future Ready Learning

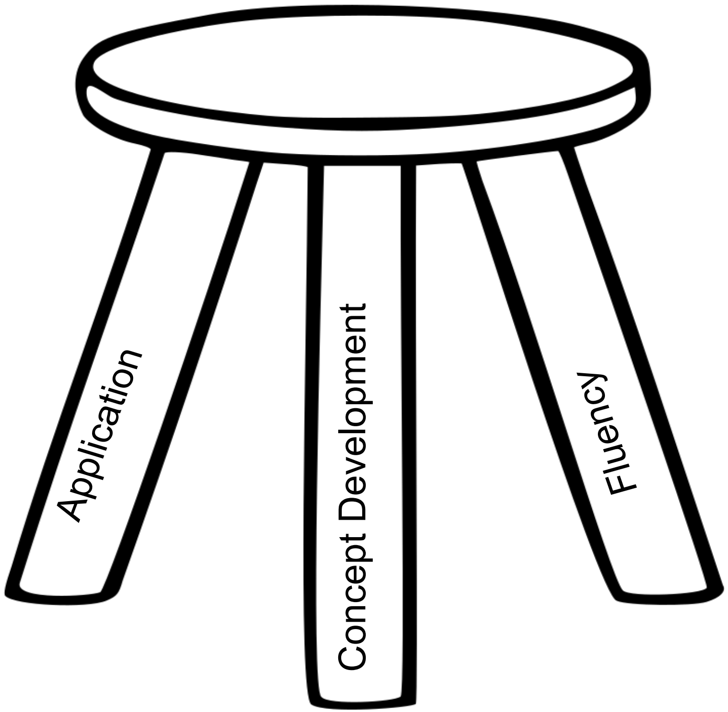
Guiding Questions

What are the learning needs of advanced learners?

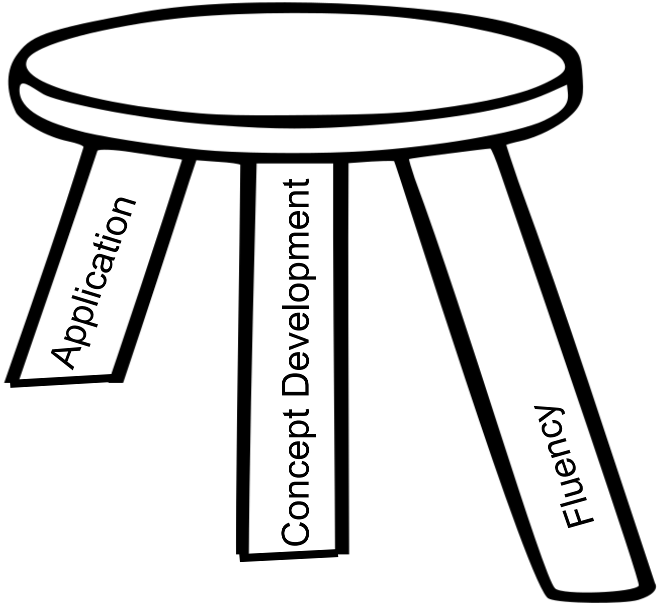
What instructional strategies are effective for meeting the needs of advanced learners?

How do teachers differentiate Eureka Math tasks to provide opportunities that challenge our most advanced learners?

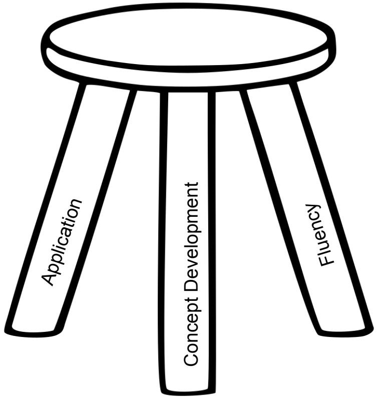
Mathematical Thinker



Accelerated Learner



Mathematical Thinker

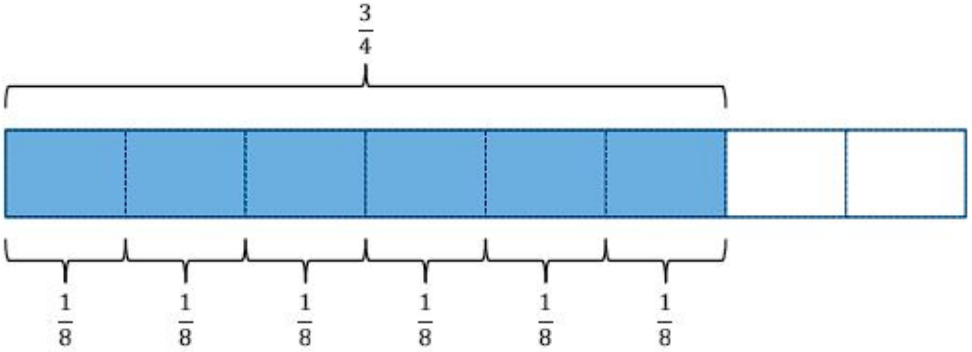


Rich Tasks

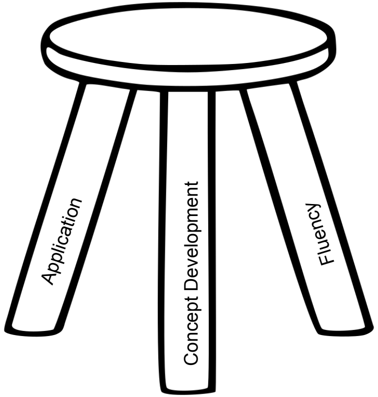
- Reasoning & Problem Solving
- Open and Multi-faceted
- Discussion & Connections

Exit Ticket

Write a story problem using the measurement interpretation of division for the following: $\frac{3}{4} \div \frac{1}{8} = 6$.



Mathematical Thinker



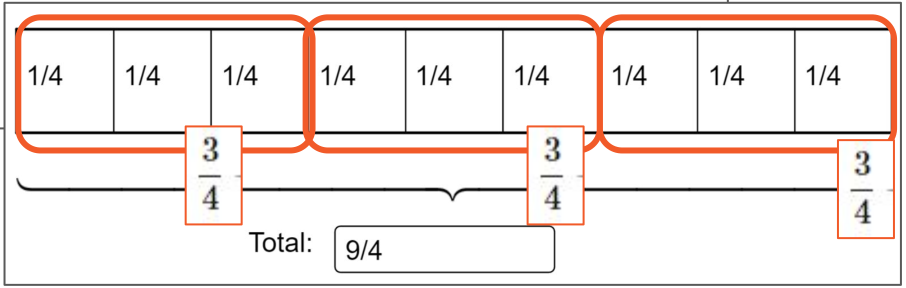
Representations

- Concrete
- Pictoral
- Abstract

Exit Ticket

Find the quotient. Draw a model to support your solution.

1. $\frac{9}{4} \div \frac{3}{4}$



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What are the learning needs of advanced learners?

- Organize instruction around big Ideas
- Capitalize on student interests and creativity
- Opportunities to connect ideas across mathematics and to other disciplines
- Appropriate complexity and depth
- Responsive pacing
- Supported risk

How Eureka Math includes these ideas for our most advanced learners

Introducing Creativity

- Generate as many equivalent XXXX as you can to show XXXX. Try to think of ways no one else in the class has created.
- What is the power of XXXX and what impact does is have on society?

Come up with two examples of ratio relationships that are interesting to you.

2. Describe a situation that could be modeled with the ratio 4: 1.

5. Describe a situation that can be modeled by the integer -15. Explain what zero represents in the situation.

How Eureka Math includes these ideas for our most advanced learners

Introducing Depth & Complexity

- Explain the patterns you see in problems XX-XX. How do those patterns relate to this problem?
- Does this strategy work all the time?
- Can you find more efficient ways to model this strategy?

Sam says 50% of the vehicles are cars. Give three different reasons or models that prove or disprove Sam's statement. Models can include tape diagrams, 10×10 grids, double number lines, etc.

Here is a theorem: If $A: B$ with $B \neq 0$ and $C: D$ with $D \neq 0$ are equivalent, then they have the same value: $\frac{A}{B} = \frac{C}{D}$.

This is essentially stating that if two ratios are equivalent, then their values are the same (when they have values).

Can you provide any counterexamples to the theorem above?

a. Describe any patterns you see in the tables. Be specific in your descriptions.

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How Eureka Math includes these ideas for our most advanced learners

Introducing Connections

- Write a story problem that the XXXX might represent.
- What professionals might use XXXX in their work? (requires some research!)
- When would XXXX be useful in your life?

2. Write a story context that would be represented by the ratio 1: 4.

Write a one-sentence story problem about a ratio.

c. Write a sentence describing how you could create a more precise ruler to measure your pencil strip.

Q & A

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