MATH IS FIGUREOUTABLE!

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Problem String

Lesson structure

Series (string) of problems

Intended to facilitate construction of relationships and connections in the learner’s mind

7 x 8
70 x 8
69 x 8
6 x 9
6 x 90
6 x 89
8 x 59
Problem String

Lesson structure

Series (string) of problems

Intended to facilitate construction of relationships and connections in the learner’s mind

\begin{align*}
  y &= x^2 \\
  y &= 3x \\
  y &= x^2 + 3x \\
  y &= x(x + 3)
\end{align*}
Problem Strings  Problem Talks

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Problem Strings

Problem Talks

(Short lived)

More Than One Way

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Problem Strings

Problem Talks

“Poke Around”  (short lived)
More Than One Way

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Problem Strings

Problem Talks

Compare Towards Efficiency
“Poke Around” (short lived)
More Than One Way

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Problem Strings

Construct

Problem Talks

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Problem Strings

- Construct
- Series of related problems

Problem Talks

- Compare Towards Efficiency
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Problem Strings

- **Construct**
  - Series of related problems
  - Focused toward constructing a particular model, big idea, or strategy

Problem Talks

- **Compare Towards Efficiency**
  - “Poke Around” (short lived)
  - More Than One Way

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Problem Strings

Construct

Series of related problems
Focused toward constructing a particular model, big idea, or strategy
Systematically nudges toward more efficient and sophisticated strategies

Problem Talks

Compare Towards Efficiency
“Poke Around” (short lived)
More Than One Way
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**Compare Towards Efficiency**
- “Poke Around” (short lived)
- More Than One Way
- Fewer problems, often one problem

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**Compare Towards Efficiency**

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- For these number, this structure, which is clever, elegant, efficient

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- $15 \times 18$ vs $37 \times 99$

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Problem Strings

Construct

Series of related problems

Focused toward constructing a particular model, big idea, or strategy

Systematically nudges toward more efficient and sophisticated strategies

80%

Problem Talks

Compare Towards Efficiency

“Poke Around” (short lived)

More Than One Way

Fewer problems, often one problem

Compare already constructed strategies.

For these number, this structure, which is clever, elegant, efficient

15 x 18 vs 37 x 99

20%

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Problem Talks

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**Problem Talks**

**Compare Towards Efficiency**
- Mini-lesson 10 - 20 mins
- Teacher chooses who shares, purposefully
- Teacher models student thinking with a model

- “Poke Around” (short lived)
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```
15 x 18 vs 37 x 99
```

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Problem Talks

**Compare Towards Efficiency**
- Mini-lesson 10 - 20 mins
- Teacher chooses who shares, purposefully
- Teacher models student thinking with a model
- All strategies are not equal

**“Poke Around”** (short lived)
- Fewer problems, often one problem
- Compare already constructed strategies.
- For these number, this structure, which is clever, elegant, efficient

80% vs 20%

15 x 18 vs 37 x 99

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MATH IS FIGUREOUTABLE!

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It’s About Relationships

• Among the numbers and structures to solve problems

• Between teachers and students to mentor and nurture young mathematicians
Empowering math teachers everywhere.

We help teachers teach more students more math more effectively. You are in the right place if you strive to help your students be sense makers, co-creators of their mathematical knowledge, thinking like a mathematician. If you de-emphasize algorithms and rote-memorization. If you believe that math is figureoutable!

Receive weekly emails to help you become the math teacher you want to be.

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QUESTIONS?

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