Inquiry-Based Learning: What Do I Ask Next?

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What does inquiry-based learning entail?

Inquiry involves the actions of productively struggling to find explanations (Jarrett, 1997)	Inquiry-based learning refers to the activities of students in which they develop knowledge and understanding (Anderson, 2002)	Acquiring knowledge from direct observations: the art of raising questions (Oguz-unver & Arabaciouglu, 2011)

What does this mean to you?

What students do:

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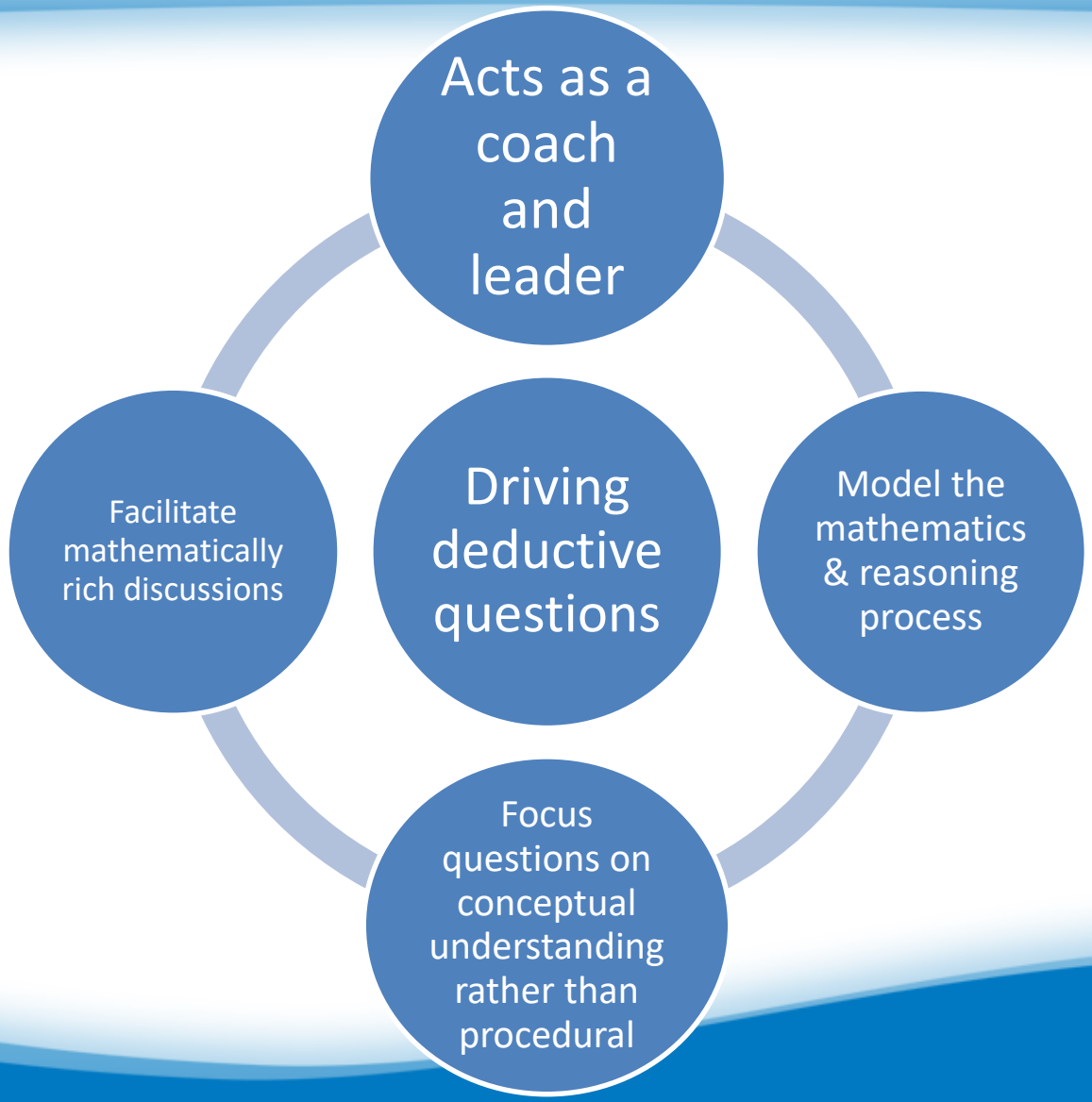
What teachers do:



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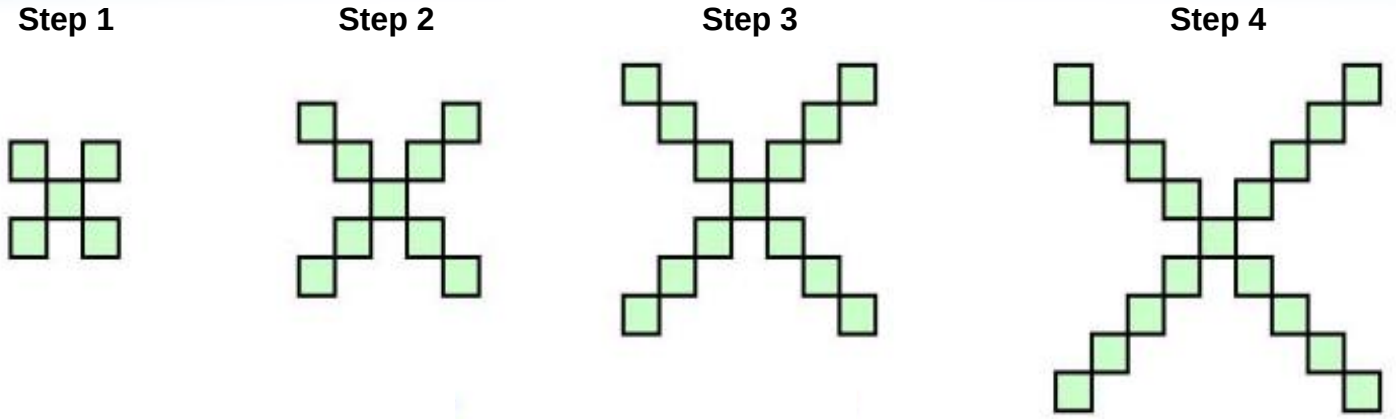
Questions

After?

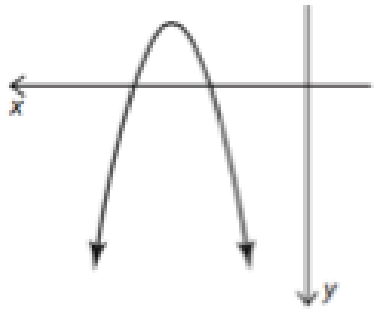
Task 1



- Mathematical Goal: To develop the explicit formula for the “X” Pattern.
- What questions would you ask?
  - Before?
  - During?
  - After?

Task 2

Analyze each graph. Then, circle the function(s) which could model the graph. Describe the reasoning you used to either eliminate of choose each function.



$f_1(x) = -2(x+1)(x+4)$

$f_2(x) = -\frac{1}{3}x^2 - 3x - 6$

$f_3(x) = 2(x+1)(x+4)$

$f_4(x) = 2x^2 - 8.9$

$f_5(x) = 2(x-1)(x-4)$

$f_6(x) = -(x-6)^2 + 3$

$f_7(x) = -3(x+2)(x-3)$

$f_8(x) = -(x+6)^2 + 3$

Task 2

- Mathematical Goal: Characteristics of graphs/equations and their variations represented on the graph.

- What questions would you ask?
  - Before (green), during (orange) & after (pink)
  - Be able to justify your question

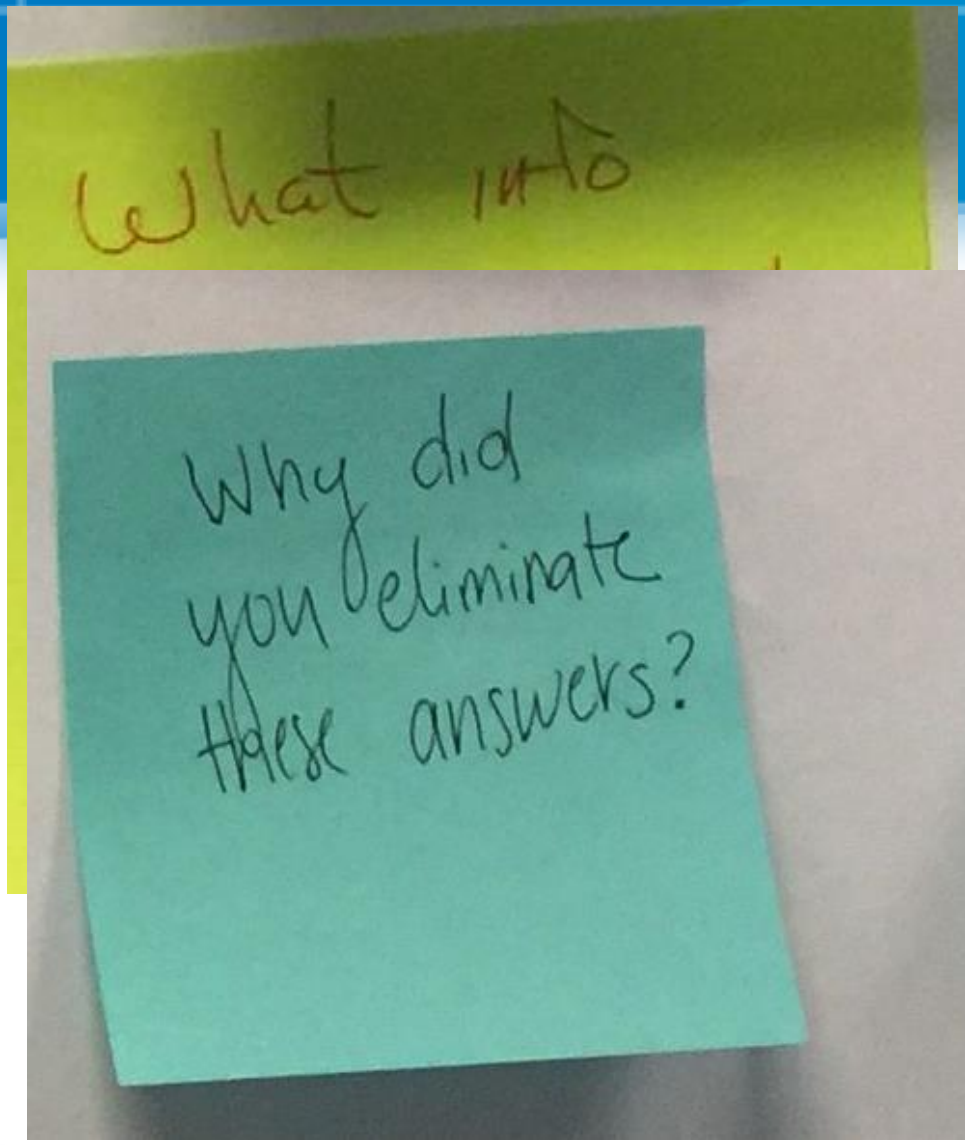
Questioning Continuum

Questions that get a generic/simple yes/no answer

Mathematically rich questions driving conceptual understanding

Discussion

What do you notice?


What info
Why did you eliminate these answers?
#2
Why would we set the equation
After
Can you find another fn that would have similar graph?

Questions?