Contemplate then Calculate Instructional Routine Pre-Planner

<table>
<thead>
<tr>
<th>Task:</th>
<th>Goal:</th>
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<tbody>
<tr>
<td>![Task Image]</td>
<td>![Goal Image]</td>
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Do the math yourself and anticipate student thinking & language

<table>
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<tr>
<th>Mathematical Noticings</th>
<th>Possible Shortcuts</th>
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<tbody>
<tr>
<td>![Noticings Image]</td>
<td>![Shortcuts Image]</td>
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Annotate

How will you record / annotate student approaches?

![Annotate Image]
Contemplate then Calculate Instructional Routine Planner

Launch

What will you say to students about what they be doing and why?

Contemplate then Calculate

* WHAT: Quick count by chunking, changing the form and connecting to math you know.
* WHY: To "think like mathematicians", to use mathematical structure to find shortcuts.

Notice

How long will you project the task?

ASK YOURSELF:
What might be mathematically important?

What do you notice?

What noticings would be important share in the full group and record?

I noticed...

What did you notice?
### Develop Shortcuts

**Find counting shortcut**
- Find the total number of circles without counting each one individually.
- Prepare to explain your shortcut using **chunk**, **change**, and **connect**.

**What shortcuts will you share? In what order?**

### Discus Shortcuts

**Share and study shortcuts**

**How will you record and annotate shortcuts?**

### Reflect on Thinking

**Reflect on learning**
- **a)** To find a shortcut look for ___________.
- **b)** Noticing ___________ helped calculate quickly because ___________.
- **c)** Knowing ___________ comes in handy when calculating quickly because ___________.

**What reflection prompts will you provide?**