

**Contemplate then Calculate Routine PRE-PLANNER**

|       |       |
|-------|-------|
| Task: | Goal: |
|-------|-------|

**Contemplate then Calculate**

|                        |                    |
|------------------------|--------------------|
| Mathematical Noticings | Possible Shortcuts |
|------------------------|--------------------|

**Anticipate**


|                             |   |
|-----------------------------|---|
| What might students notice? | What shortcuts might students generate? |
|-----------------------------|---|


**Annotate**

How will you record / annotate student approaches?


## Contemplate then Calculate Routine PLANNER

### Launch





**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.



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



**Contemplate then Calculate** 







Notice


Find calculation shortcut


Share & study shortcut

Reflect on learning




### Notice





**What do you notice?** 

**ASK YOURSELF:**  
*What might be mathematically important?*




How long will you project the task? What noticings would be important to share in the full group and record?





**What do you notice?** 

INSERT TASK HERE




**Share**


I noticed...

What did you notice?




### Develop Shortcuts

Which shortcuts will you share? In what order?

**Find counting shortcut** 

- Find the total number of shaded squares quickly in your head
- Prepare to explain your shortcut using chunk, change, connect.

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**Find counting shortcut** 

- Find the total number of shaded squares quickly in your head
- Prepare to explain your shortcut using chunk, change, connect.

INSERT TASK HERE

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### Discuss Shortcuts

How will you record and annotate shortcuts?

**Share and study shortcuts**

INSERT TASK HERE


**PRESENTER**  
 • We noticed...so we...  
 • We knew...so we...

**AUDIENCE**  
 • They noticed...so they...  
 • They knew...so they...

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### Reflect on Thinking

What reflection prompts will you provide?

**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 \_\_\_\_\_.

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