

Preliminary Planning Sheet Grade 3 – Picking Tomatoes

Domain(s)

Operations and Algebraic Thinking

Standard(s)

3.OA.D.9

Mathematical Practices

MP.1 MP.3 MP.4 MP.6 MP.7

Major Underlying Mathematical Concepts

- Ordinal numbers
- Addition/Multiplication
- Number sense to 30
- Relationships/Patterns

Problem Solving Strategies

- Model (manipulatives)
- Diagram/Key
- Table
- Tally chart
- Number line
- Graph

Formal Mathematical Language and Symbolic Notation

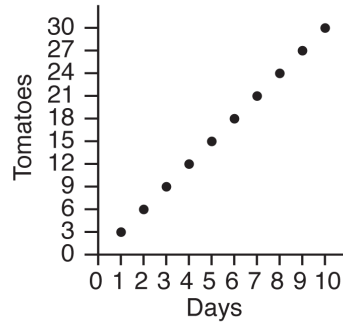
- Model
- Diagram/Key
- Table
- Graph
- Number line
- Day, week, month
- Per
- Pattern
- Multiples
- Odd/Even
- Greater than (>)/Less than (<)
- Equivalent/Equal to
- Ordinal numbers
- 1st, 2nd, 3rd ...
- Rules: $3 \cdot d = t$, $d + d + d = t$
- Variable
- Axis
- Input/Output
- Sets

Possible Solution(s)

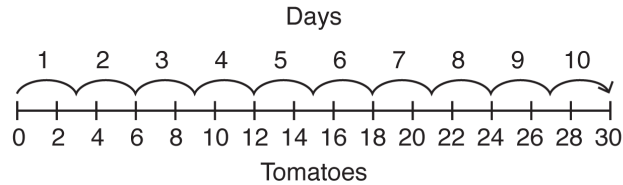
Nick will pick 30 tomatoes on the 10th day.

Picking Tomatoes

Day	Tomatoes
1	3
2	6
3	9
4	12
5	15
6	18
7	21
8	24
9	27
10	30



Rule
d is day
t is tomatoes
 $d + d + d = t$
 $3 \cdot d = t$



Possible Connections

Below are some examples of mathematical connections. Your students may discover some that are not on this list.

- Patterns: Day +1, Tomatoes +3
- The pattern is continued for 2 weeks.
- Nick picked tomatoes for 1 week plus 3 days.
- Solve more than one way to verify the answer.
- Relate to a similar task and state a math link.
- Nick picks a total of 165 tomatoes.
- Graph the input/output.
- Generalize and prove the rules: $d + d + d = t$, $3 \cdot d = t$ where d is day and t is tomato.
- Nick picked 27 more tomatoes on the 10th day than the 1st day.