

Proportional Reasoning

Grade Seven Proportional Reasoning HLC

Recognize proportional relationships and identify the unit rate in tables, graphs, equations and in context.

September

Grade Seven (PR) Learning Progressions

June

Students must use visual representations to build understanding along this trajectory and interact with a variety of proportional contexts.
Be VERY cautious of introducing algorithms before conceptual understanding is SOLID

Critical Strategies: Look for and identify multiplicative relationships in tables and diagrams.
(The cross products algorithm does not qualify as demonstrating understanding.)

Look for and identify proportional relationships.

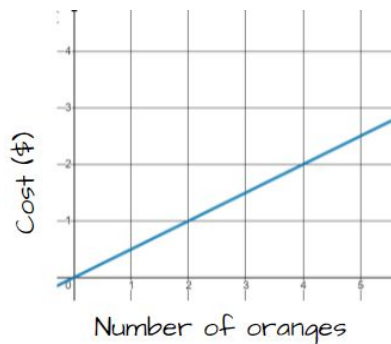
Visual Representations



Tables

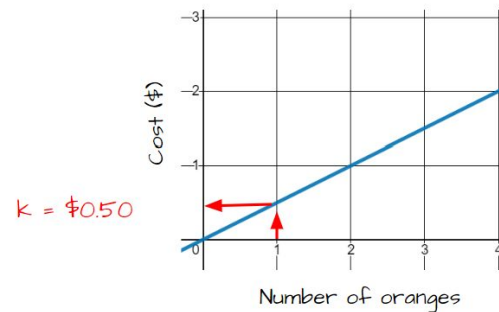
oranges	0	3	4	6
Cost (\$)	0	1.50	2.00	3.00

Graphs



Determine the constant of proportionality (k)

Graphs



Tables

oranges	3	4	6	10	1
Cost (\$)	1.50	2.00	3.00	5.00	k

* $\frac{1}{10}$

$\cdot k = 0.5$

Equations

$$k = \frac{y}{x}$$

Write an equation in terms of k

Can create $y = k \cdot x$ equation and move fluidly between graphs, tables and equations

$y = \text{cost in dollars}$
 $x = \text{number of oranges}$
 $y = 0.5x$

