## Unit 6 Lesson 16: Two Related Quantities, Part 1

### 1 Which One Would You Choose? (Warm up)

#### Student Task Statement

Which one would you choose? Be prepared to explain your reasoning.

* A 5-pound jug of honey for $15.35
* Three 1.5-pound jars of honey for $13.05



### 2 Painting the Set

#### Student Task Statement

Lin needs to mix a specific shade of orange paint for the set of the school play. The color uses 3 parts yellow for every 2 parts red.

1. Complete the table to show different combinations of red and yellow paint that will make the shade of orange Lin needs.

| * cups of red paint $\left(r\right)$
 | * cups of yellow paint $\left(y\right)$
 | * total cups of paint $\left(t\right)$
 |
| --- | --- | --- |
| * 2
 | * 3
 |  |
| * 6
 |  |  |
|  |  | * 20
 |
|  | * 18
 |  |
| * 14
 |  |  |
| * 16
 |  |  |
|  |  | * 50
 |
|  | * 42
 |  |

1. Lin notices that the number of cups of red paint is always $\frac{2}{5}$ of the total number of cups. She writes the equation $r=\frac{2}{5}t$ to describe the relationship. Which is the **independent variable**? Which is the **dependent variable**? Explain how you know.
2. Write an equation that describes the relationship between $r$ and $y$ where $y$ is the independent variable.
3. Write an equation that describes the relationship between $y$ and $r$ where $r$ is the independent variable.
4. Use the points in the table to create two graphs that show the relationship between $r$ and $y$. Match each relationship to one of the equations you wrote.





© CC BY Open Up Resources. Adaptations CC BY IM.