

Teacher Notes.

Lesson 2: Ratios

Classwork

Exercise 1

Come up with two examples of ratio relationships that are interesting to you. (Examples)

- My brother watches twice as much television as I do.
ratio: 2:1 or 2 to 1
- For every two chores gives my brother, she gives 3 to me.
ratio: 2:3 or 2 to 3

Exploratory Challenge

A T-shirt manufacturing company surveyed teenage girls on their favorite T-shirt color to guide the company's decisions about how many of each color T-shirt they should design and manufacture. The results of the survey are shown here.

Favorite T-Shirt Colors of Teenage Girls Surveyed

| | | | | | | |
|-----|------|-------|-------|------|--------|--------|
| | | | | X | | |
| | | | | X | | |
| | | | | X | X | |
| | X | | | X | X | X |
| | X | | | X | X | X |
| | X | X | | X | X | X |
| X | X | X | | X | X | X |
| Red | Blue | Green | White | Pink | Orange | Yellow |

Exercises for Exploratory Challenge

- Describe a ratio relationship, in the context of this survey, for which the ratio is 3:5.

The number of girls who answered orange to the number of girls who answered pink.

2. For each ratio relationship given, fill in the ratio it is describing.

| Description of the Ratio Relationship (Underline or highlight the words or phrases that indicate the description is a ratio.) | Ratio |
|---|---------------|
| For every 7 white T-shirts they manufacture, they should manufacture 4 yellow T-shirts. The ratio of the number of white T-shirts to the number of yellow T-shirts should be ... | 7:4 |
| For every 4 yellow T-shirts they manufacture, they should manufacture 7 white T-shirts. The ratio of the number of yellow T-shirts to the number of white T-shirts should be ... | 4:7 |
| The ratio of the number of girls who liked a white T-shirt best to the number of girls who liked a colored T-shirt best was ... | 7:19 |
| For each red T-shirt they manufacture, they should manufacture 4 blue T-shirts. The ratio of the number of red T-shirts to the number of blue T-shirts should be ... | 1:4 |
| They should purchase 4 bolts of yellow fabric for every 3 bolts of orange fabric. The ratio of the number of bolts of yellow fabric to the number of bolts of orange fabric should be ... | 4:3 |
| The ratio of the number of girls who chose blue or green as their favorite to the number of girls who chose pink or red as their favorite was ... | 6:6 or 1:1 |
| Three out of every 26 T-shirts they manufacture should be orange. The ratio of the number of orange T-shirts to the total number of T-shirts should be ... | 3:26 |

3. For each ratio given, fill in a description of the ratio relationship it could describe, using the context of the survey.

| Description of the Ratio Relationship (Underline or highlight the words or phrases that indicate your example is a ratio.) | Ratio |
|---|---------|
| They should make 4 yellow t-shirts <u>for every</u> 3 orange t-shirts. The ratio of the # of yellow t-shirts <u>to</u> the # of orange t-shirts should be... | 4 to 3 |
| They should make 3 orange t-shirts <u>for every</u> 4 t-shirts. The ratio of the orange t-shirts <u>to</u> the # of blue t-shirts be ^{should} be... | 3:4 |
| <u>For every</u> 19 colored t-shirts, they should be 7 white shirts. The ratio of the # of colored t-shirts <u>to</u> the # of white t-shirts should be... | 19:7 |
| <u>7 out of</u> 26 T-shirts should be white. The ratio of the number of white t-shirts <u>to</u> the number of total t-shirts should be... | 7 to 26 |