

Name: _____

Exploratory Challenge Ratios

A t-shirt manufacturing company surveyed teen-aged 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 Teen-Aged Girls Surveyed



Exercises for Exploratory Challenge

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

- 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...	
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...	
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...	
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...	
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...	
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 ...	
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. 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
	4 to 3
	3:4
	7 to 26

4. At the 6th grade school dance, there are 132 boys, 89 girls, and 14 adults.
- Write the ratio of the number of boys to the number of girls. _____
 - Write the same ratio using another form ($A : B$ vs. A to B or A/B) _____
 - Write the ratio of the number of boys to the number of adults. _____
 - Write the same ratio using another form. _____
5. Choose a situation that could be described by the following ratios, and write a sentence to describe the ratio in the context of the situation you chose.
- For example: 3:2. When making pink paint, the art teacher uses the ratio 3:2. For every 3 cups of white paint she uses in the mixture, she needs to use 2 cups of red paint.
- 1 to 2 -
 - 29 to 30 -
 - 52:12 -