

Ratios and Proportions
Geometry

Write each ratio in lowest terms.

- 1) 15 to 3 2) 12:6 3) $\frac{24}{14}$ 4) 18/10 5) 52:39

Put in lowest terms.

- 6) 9 apples to 21 oranges 7) 5 horses to 300 cows 8) 200 bats to 400,000 insects

Use the table of information at the right to answer the following questions by giving a ratio in lowest terms.

- 9) Honda to Dodge? A group of students counted the types of cars in the parking lot and found the following distribution:
- | | |
|------------|----|
| Chevrolet: | 65 |
| Dodge: | 84 |
| Geo: | 15 |
| Ford: | 72 |
| Honda: | 48 |
| Mercedes: | 3 |
| Nissan: | 30 |
| Toyota: | 42 |
- 10) Toyota to Nissan?
11) Geo to Chevrolet?
12) Chevrolet to Ford?
13) Mercedes to Toyota?
14) Ford to Honda?

Use two different methods to show whether the following ratios are proportional or not.

- 15) $\frac{5}{3}$ and $\frac{15}{9}$ 16) $\frac{12}{20}$ and $\frac{2}{5}$ 17) $\frac{51}{17}$ and $\frac{12}{4}$ 18) $\frac{27}{54}$ and $\frac{13}{26}$

Solve each proportion for the missing value.

- 19) $\frac{8}{6} = \frac{x}{15}$ 20) $\frac{a}{4} = \frac{35}{20}$ 21) $\frac{12}{5} = \frac{72}{k}$ 22) $\frac{9}{v} = \frac{63}{42}$

In a university music class there are 3 brass musicians for every 5 that play the strings.

- 23) If there are 12 brass musicians in the class, how many musicians play the strings?
- 24) If there are 40 that play the strings, how many brass are there?
- 25) What is the smallest possible number of total brass and string players in the class?
- 26) If the ratio of brass and string musicians in the class compared to all others is 5 to 7, and there are 35 brass and string musicians in class, how many students are enrolled in the class?