

Ratio Tables to Equations Worksheet

During a particular U.S. Air Force training exercise, the ratio of the number of men to the number of women was 6: 1. Use the ratio table provided below to create at least two equations that model the relationship between the number of men and the number of women participating in this training exercise.

| Women (W) | Men (M) |
|---------------|-------------|
| | |
| | |
| | |
| | |
| | |

Equations:

If 200 women participated in the training exercise, use one of your equations to calculate the number of men who participated.

Malia is on a road trip. During the first five minutes of Malia’s trip, she sees 18 cars and 6 trucks. Assuming this ratio of cars to trucks remains constant over the duration of the trip, complete the ratio table using this comparison. Let TT represent the number of trucks she sees, and let CC represent the number of cars she sees.

| Trucks (T) | Cars (C) |
|----------------|--------------|
| 1 | |
| 3 | |
| | 18 |
| 12 | |
| | 60 |

What is the value of the ratio of the number of cars to the number of trucks?

What equation would model the relationship between cars and trucks?

At the end of the trip, Malia had counted 1,254 trucks. How many cars did she see?

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During a particular U.S. Air Force training exercise, the ratio of the number of men to the number of women was 6:1. Use the ratio table provided below to create at least two equations that model the relationship between the number of men and the number of women participating in this training exercise.

| Women (W) | Men (M) |
|-----------|---------|
| 1 | 6 |
| 2 | 12 |
| 3 | 18 |
| 4 | 24 |
| 5 | 30 |

Equations:

$$M = 6W$$

$$W = \left(\frac{1}{6}\right)M$$

$$\frac{M}{W} = 6$$

$$\frac{W}{M} = \frac{1}{6}$$

If 200 women participated in the training exercise, use one of your equations to calculate the number of men who participated.

I can substitute 200 for the value of women and multiply by 6, the value of the ratio, to get the number of men. There would be 1,200 men participating in the training exercise.

Exercise 5

Maia is on a road trip. During the first five minutes of Maia's trip, she sees 18 cars and 6 trucks. Assuming this ratio of cars to trucks remains constant over the duration of the trip, complete the ratio table using this comparison. Let T represent the number of trucks she sees, and let C represent the number of cars she sees.

| Trucks (T) | Cars (C) |
|------------|----------|
| 1 | 3 |
| 3 | 9 |
| 6 | 18 |
| 12 | 36 |
| 20 | 60 |

What is the value of the ratio of the number of cars to the number of trucks?

$$\frac{3}{1}$$

What equation would model the relationship between cars and trucks?

$$C = 3T \text{ and } T = \left(\frac{1}{3}\right)C$$

At the end of the trip, Maia had counted 1,254 trucks. How many cars did she see?

$$C = 1,254 \cdot 3; C = 3,762 \text{ cars}$$