Equivalent Ratios

A ratio is a comparison of two quantities.
It can be written in three different ways:

a : b, a to b, or a/b

When both values in a ratio are multiplied or divided by the same, nonzero number, we have equivalent ratios. The 2:6 is equal to the ratio 1:3 because both numbers in the first ratio were divided by 2.

1. Complete the four ratios that are equivalent to the ratio 18: 40. Show the value that you multiplied or divided by.

9: _____   _____ :10   _____ :80   27: _____

2. Mrs. Battaglia said that there is 1 boy for every 2 girls in her second class of the day.

a. Change this to a part-to-whole ratio and describe what it means in words.

_____

_____

b. If there are 30 students in Mrs. Battaglia's class, how many are boys and how many are girls?

_____

_____

c. Mrs. Battaglia put together 6 baskets of supplies for the 30 students to use. Create a ratio that compare the baskets to students.

_____

_____

d. What other ratios can we use to represent this relationship?

_____

_____

_____

e. All of the sixth grade class is going on a field trip. There must be a 4:1 ratio of students to adults. If there are 600 sixth grade students, use equivalent ratios to help determine how many adults must also attend the field trip.

_____

_____

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1. Complete the four ratios that are equivalent to the ratio 18: 40. Show the value that you multiplied or divided by.

9: _____**20**_____ _____**4.5**_____ :10 _____**36**_____ :80 27: _____**60**_____
      (divided by 2)   **(divided by 4)**   **(multiplied by 2)**   **(multiplied by 1.5)**

2. Mrs. Battaglia said that there is 1 boy for every 2 girls in her second class of the day.

a. Change this to a part-to-whole ratio and describe what it means in words.

1:3 – boys to total class Or 2:3 – girls to total class

_____

b. If there are 30 students in Mrs. Battaglia's class, how many are boys and how many are girls?

10 boys, 20 girls

_____

c. Mrs. Battaglia put together 6 baskets of supplies for the 30 students to use. Create a ratio that compare the baskets to students.

6:30, 6 to 30 or 6/30

_____

d. What other ratios can we use to represent this relationship?

Answers will vary. Sample responses include:

1:5, 2:10, 3:15, 4:20, 5:25, 7:35, 8:40, 9:45, 10:50, 11:55,

12:60….30:150…60:300

e. All of the sixth grade class is going on a field trip. There must be a 4:1 ratio of students to adults. If there are 600 sixth grade students, use equivalent ratios to help determine how many adults must also attend the field trip.

4 students to 1 adult   4 x ? = 600 4 x 150 = 600 4:1 = 4(150) : 1(150) = 600: 150 _____

There must be 150 adults when 600 students attend the field trip. _____