Ratio and Rate Word Problems Beginner

Make sure all final answers are simplified. You may use a calculator.

1. The Gonzalez family has five children. Two are brunette, two have black hair, and one has red hair.
    a. What is the ratio of redheads to black haired children?

    b. What is the ratio of brunettes to red-headed children?

    c. What ratio of the children have black hair?

    d. What ratio of the children have red hair?

2. The fruit basket contains 10 pieces of fruit: 4 apples, 3 oranges, 2 pears, and a banana.
    a. What is the ratio of apples to total fruit?

    b. What is the ratio of apples to oranges?

    c. What ratio of the fruit are pears?

    d. What is the ratio of oranges to fruit that are not oranges?

3. The students in a GED classroom did a poll to see what kinds of pets the class possessed. It was discovered that altogether, the class had 23 pets. The results are summarized in the table below.

Animal	Number	Animal	Number
Dogs	11	Rabbit	2
Cats	5	Turtle	1
Snake	1	Horse	3

    a. What is the ratio of cats to rabbits?

    b. What is the ratio of horses to dogs?

    c. What is the ratio of dogs to other kinds of pets?

    d. What is the ratio of rabbits to snakes?

    e. What ratio of the pets are horses?

4. Old Macdonald had a farm and on his farm he had seven chickens, four ducks, three turkeys, four pigs and two cows.
   a. What was the ratio of ducks to cows?

   b. What was the ratio of chickens to other birds?

   c. What was the ratio of pigs to birds?

   d. What ratio of the animals are pigs?

   e. What ratio of the animals are cows?

   f. What ratio of the animals are birds?

5. Circle all the ratios that are equivalent to $\frac{1}{2}$.

   $\frac{3}{4}$ 4: 8   6 to 9   6: 3 $\frac{5}{10}$ 2: 3   20 to 10 $\frac{20}{40}$ 7 to 14

6. Circle all the ratios that are equivalent to 2:5.

   $\frac{3}{8}$ 4: 10   3 to 9   15: 6 $\frac{12}{30}$ 6: 10   20 to 50 $\frac{10}{25}$ 6 to 15

7. List three ratios that are equivalent to $\frac{3}{2}$.

8. List three ratios that are equivalent to 5:4.

9. Of the seven students in reading class, five made a gain on the last TABE test. What ratio of students did not make a gain on the last TABE test?

10. Of the 563 students at Garaund High School, 379 are lower classmen. What ratio of the students are upperclassmen?

11. Of the 14 employees at Shine Radio Station, two walk to work, one bicycles, three take public transportation and the rest drive to work.
    a. What is the ratio of those who walk to those who bike?

    b. What ratio of employees drive to work?

    c. What is the ratio of those who take public transportation to those who do not?

    d. In the winter, the employees who walked and bicycled all drive to work instead. What is the ratio of employees who drive to work in the winter?

ANSWERS:

1) a) $\frac{1}{2}$ b) $\frac{2}{1}$ c) $\frac{2}{5}$ d) $\frac{1}{5}$

2) a) 2:5   b) 4:3   c) $\frac{1}{5}$ d) 3:7   3) a) $\frac{5}{2}$ b) $\frac{3}{11}$ c) $\frac{11}{12}$ d) $\frac{2}{1}$ e) $\frac{3}{23}$ 4) a) 2:1 b) 1:1 c) 2:7

d) $\frac{1}{5}$ e) $\frac{1}{10}$ f) $\frac{7}{10}$

5)

$\frac{3}{4}$ ⬭4 : 8   6 to 9   6 : 3   ⬭$\frac{5}{10}$ 2 : 3   20 to 10   ⬭$\frac{20}{40}$ ⬭7 to 14

6)

$\frac{3}{8}$ ⬭4 : 10   3 to 9   15 : 6   ⬭$\frac{12}{30}$ 6 : 10   ⬭20 to 50   ⬭$\frac{10}{25}$ ⬭6 to 15

7) Answers will vary

8) Answers will vary

9) $\frac{2}{7}$

10) $\frac{184}{563}$

11) a) 2:1 b) $\frac{4}{7}$ c) 3:11 d) $\frac{11}{14}$