Chapter

4 ADDITIONAL PRACTICE
RATIOS

Exercise 4A   Introducing Ratio (1)

1. Ronnie painted some octopuses on a wall mural.

There are _____ tentacles for every octopus.

The ratio of the number of tentacles to the number of

octopuses is _____.

2. Jill arranges chairs and tables in a room.

There are _____ chairs for every table.

The ratio of the number of chairs to the number of

tables is _____.

3. Write the ratios.

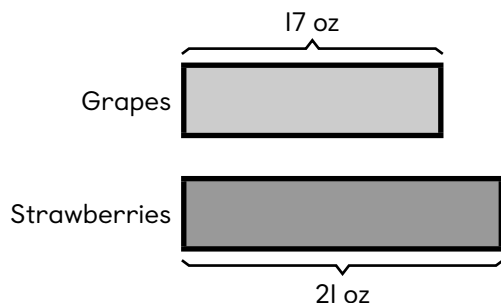**(a)** There are _____ horses, _____ ducks

and _____ cows on a farm.

(b) The ratio of cows to horses is _____.

(c) The ratio of ducks to horses is _____.

(d) The ratio of cows to ducks is _____.

2. Winnie buys 17 ounces of grapes and Olivia buys 21 ounces of strawberries.

17 oz

Grapes

Strawberries

21 oz

(a) What is the total mass of the fruits? _____

(b) What is the ratio of the mass of grapes to the mass of strawberries?

_____

(c) What is the ratio of the mass of strawberries to the total mass of the fruits?

_____

3. A pack of cereal contains the following ingredients:

Dried fruit	16 g
Walnuts	23 g
Rolled oats	11 g
Corn flakes	10 g

(a) Find the total mass of the ingredients in the pack of cereal.

(b) Fill in the table to show the ratios.

The ratio of:	Ratio
The mass of walnuts to the mass of corn flakes	
The mass of rolled oats to the total mass of cereal	
The mass of dried fruit to the mass of walnuts	
The total mass of cereal to the mass of walnuts	
The mass of dried fruit to the mass of rolled oats	

Exercise 4B   Equivalent Ratios (1)

1.   Express the ratio in its simplest form.

(a)   36 : 20   **(b)**   24 : 64

(c)   45 : 90   **(d)**   42 : 70

(e)   99 : 117   **(f)**   91 : 52

(g)   18 feet : 9 feet   **(h)**   20 days : 14 days

(i)   32 ounces : 8 ounces   **(j)**   560 grams : 2000 grams

2.   Use division to find three ratios equivalent to 56 : 24.

_____

3.   Use multiplication to find three ratios equivalent to 5 : 11.

_____

4.   The ratio of the length to the width of the rectangle is 3 : 2.

(a)   Complete the following table.

Length (inches)	3		60		96
Width (inches)	2	24		52	

Exercise 4C   Real-World Problems: Ratios Involving Two Quantities

Solve these word problems. Draw models to help you.

1.   In a survey, the students who chose baseball and football as their favorite sport are in the ratio 3 : 8.

    (a)   If 132 students were surveyed, how many students chose football as their favorite sport?

    (b)   How many fewer students chose baseball than football?

2.   For a school fund raising project, the amounts of money Aiden and Jason collected are in the ratio 7 : 12. Jason collected $132.50 more than Aiden. Find the total amount of money they collected.

Exercise 4F   Ratios and Fractions (1)

1.   There are 15 goldfish and 40 guppies in an aquarium.

    (a)   What is the ratio of goldfish to guppies?
    (b)   Express the number of goldfish as a fraction of the number of guppies.
    (c)   What fraction of the fishes are goldfish?

2.   Jane bakes 20 pies. Mike bakes 12 more pies than her.

    (a)   What is the ratio of the number of pies Jane bakes to the number of pies Mike bakes?
    (b)   Express the number of pies Jane bakes as a fraction of the number of pies Mike bakes.
    (c)   What fraction of the pies does Mike bake?

Exercise 4G   Changing Ratios (1)

1. Nina and Glenn shared some crayons in the ratio 9 : 5. After Nina gave Glenn 21 crayons, the ratio of Nina's crayons to Glenn's crayons became 3 : 4. How many crayons did Glenn have in the end?

2. The ratio of Kenny's beads to Sarah's beads was 7 : 5. After Sarah gave 48 beads to Kenny, the ratio became 3 : 1. How many beads did Kenny have in the end?