

Group A – Maths

W/b 25.01.21

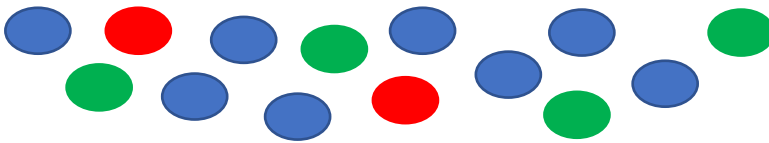
Monday - Can I use ratio notation and begin to use it to compare quantities?

1. Simplify these ratios

- a) 4 : 8 b) 5 : 10 c) 12 : 8 d) 6 : 8 : 12 e) 6 : 18 : 9 : 15

2. a) There are 50 sweets in a mixed pack. 25 are jellies, 10 are fizzy cola bottle and the rest are boiled. Write the ratio of each type of sweet in its simplest form.

3. Below are some counters, write the ratio of blue to red to green in its simplest form.



4.

Write the ratio of blue to red for each rod in its simplest form.



Write the ratio for the following:

- c) I plant 5 white flowers for every 2 red flowers.
d) Using the same ratio, if I planted 10 white flowers, how many red flowers would I have?
e) Belle has yellow and blue tiles in the ratio 2: 3



If Belle has 15 tiles altogether, how many yellow and blue tiles will she have?



- f) Colin has 16 green tiles, how many red does he have?
g) If Colin had 24 tiles altogether, how many each of the green and red tiles did he have?

Challenge:

Here is a way to make purple paint. Mix red paint and blue in the ratio 4 to 1.

* How much red paint do you need to mix with 50ml of blue paint?

** How much blue paint do you mix with 1200 ml of red paint?

Tuesday - Can I calculate ratios?



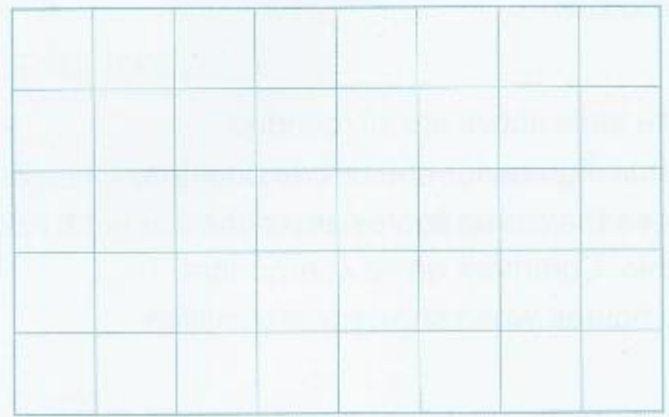
- 1 a Write the quantity of trucks to motorbikes as a ratio. _____
b Rewrite the ratio in its simplest form. _____
- 2 Use the ratio to work out how many motorbikes there would be if there were:
a 10 trucks _____ b 100 trucks _____
c 25 trucks _____

- 3 Use the ratio to work out how many trucks there would be if there were:
a 30 motorbikes _____ b 100 motorbikes _____
c 150 motorbikes _____

- 4 Imagine 15 cars were added to the trucks and motorbikes.
a Write the ratio of trucks to motorbikes to cars in its simplest form.

b How many trucks would there be if there were 45 cars? _____
c How many motorbikes would there be if there were 60 cars? _____

- 5 Colour the whole grid with a ratio of 5 red squares to 2 blue squares to 3 green squares (5:2:3).



Wednesday - Can I begin to use ratio to share a total amount?

1. On a school trip there is a ratio of 1 adult to 8 children.
180 people go on the trip in total. How many adults are there?
2. At a zoo, there is a ratio of 4 monkeys to 2 gorillas in an enclosure.
There are 42 of these animals in the enclosure. How many monkeys are there?
3. In a season of football, the ratio of goals scored to goals missed was 5:3.
If Chelsea tried 32 times in total,
How many did they score?
How many did they miss?
4. The ratio of yellow to red flowers is 4: 6. I plant 70 flowers altogether.
How many are yellow?
How many are red?
5. Lucy has a bag of sweets containing with the following ratio. If she has 42 sweets in total, how many sweets are lollies and how many are toffees.



6. In a raffle, there is one blue ticket for every 5 pink tickets sold. If 42 tickets are sold, how many are blue? How many are pink?
7. Sally, Una and Jo share £120 in the ratio 4:6:2.
How much money does each child get?

Thursday – Can I solve missing value ratio problems using multiplication and division?

Challenge 1

1 Here are the statistics for the number of home supporters at five different football matches. The ratio of home supporters to away supporters is given for each match. Calculate the number of away supporters for each match.

Home supporters	48 000	72 000	55 000	63 000	39 000
Ratio of home : away supporters	8 : 1	6 : 1	10 : 1	9 : 2	13 : 2

2 Look at each pair of statements and decide if the second statement is true or false and explain why, or give the correct answer for any that are false.

- a Grey paint is 1 part black paint to 4 parts white paint. In a 10 l tin of grey paint, there are 8 l of white paint.
- b The ratio of boys to girls in a class is 3 : 2. In a class of 30 children, there are 12 girls.
- c Sam spent £100 on clothes and CDs in the ratio 3 : 2. He spent £40 on clothes.


Challenge 2

1 Here are two strawberry smoothie recipes.

- a Calculate the amount of each ingredient required for each recipe to serve 12.
- b Which smoothie has a higher ratio of strawberry to apple?
- c How many people can you serve one smoothie to if you have 24 oranges and 24 nectarines but unlimited quantities of the other fruits?


Strawberry and nectarine smoothie
Serves 4

- 12 strawberries
- 3 nectarines
- 4 apples



Strawberry and banana smoothie
Serves 3

- 16 strawberries
- 1 banana
- 1 orange
- 4 apples



Challenge:

Here is a recipe for Chocolate Fudge Brownies.

- a Write the following ratios in their simplest form:
 - i chocolate : butter
 - ii chocolate : brown sugar
 - iii chocolate : chocolate chips
 - iv brown sugar : chocolate chips
- b How many servings are there if you use:
 - i 15 ml vanilla extract?
 - ii a dozen eggs?
 - iii 1 kg brown sugar?
 - iv 60 g butter?

Chocolate Fudge Brownie
Serves 12

- 180 g chocolate
- 120 g butter
- 200 g brown sugar
- 6 ml vanilla extract
- 2 eggs
- 180 g plain flour
- 100 g chocolate chips

Friday – Can I develop my Arithmetic skills?

In this session, we will work together on some key arithmetic skills. After the session, complete the Week 4 arithmetic test, which can be found in the Lockdown Home Learning area of the Valley website.

Answers- Monday-Thurs

MONDAY

1. a) 1:2 b) 1:2 c) 3:2 d) 3:4:6 e) 2:6:3:5

2. Jellies:Cola:Boiled = 25:10:15 Simplest form = 5:2:3

3. B:R:G = 8:2:4 Simplest form = 4:1:2

4. a) 4:6 = 2:3 b) 8:2 = 4:1

c) 5:2 d) 10 white flowers : 4 Red flowers e) 9 yellow tiles

f) 8 red tiles g) 16 G: 8 R

Challenge:

*200ml red

** 300 ml blue

TUESDAY

1. a) 5:10 b) 1:2

2. a) 20 motor bikes b) 200 motor bikes c) 50 motor bikes

3. a) 15 trucks b) 50 trucks c) 75 trucks

4. a) 5:10:15 simplest form = 1:2:3 b) 15 trucks c) 40 motor bikes

5. 20 red squares 8 blue squares 12 Green squares

WEDNESDAY

1. 20 adults 2. 28 monkeys 3. Scored 20 missed 12 4. 28 yellow 42 red

5. 28 lollies 14 toffees 6. 7 blue 35pink 7. Sally £40 : Una £60 : Jo £20

THURSDAY

Challenge 1

1. 6000 12000 5500 14000 6000

2. a) True b) True C) False He spent £60 on clothes and £40 on CDs

Challenge 2

a) Strawberry & Nectarine Smoothie x everything by 3.

36 strawbs 9 nectarines 12 apples

Strawberry & Banana Smoothie x everything by 4.

64 Strawbs 4 bananas 4 oranges 16 apples

b) Banana (it has a ratio of 16:4 compared to the nectarine with 12:4)

c) You can serve 32 people (you can serve 8 people strawb & nectarine and 24 people strawb & banana)

CHALLENGE:

a) i. choc : butter $18:12 = 3:2$

ii. Choc : sugar $18:20 = 9:10$

iii. choc : choc chips $18:10 = 9:5$

iv. sugar : choc chips $20:10 = 2:1$

b) i. 30

ii. 72

iii. 60

iv. 6