Varied Fluency
Step 6: Division to Solve Problems

National Curriculum Objectives:

Mathematics Year 6: (6C8) Solve problems involving addition, subtraction, multiplication and division
Mathematics Year 6: (6F9c) Use written division methods in cases where the answer has up to two decimal places

Differentiation:

Developing Questions to support using division to solve problems where the divisor is any number up to and including 12. The remainders are within the place value of the original number unless dividing by 10 and the solution has up to two decimal places.
Expected Questions to support using division to solve problems where the divisor is any number up to and including 12. The remainders may create an additional decimal place and the solution has up to two decimal places.
Greater Depth Questions to support using division to solve problems where the divisor may be any 2-digit number. The remainders create an additional decimal place and the solution may have up to three decimal places. Children must apply knowledge of partitioning to solve problems and some questions require a two-step process.

More resources which follow the same small steps as White Rose.

Did you like this resource? Don't forget to review it on our website.

Division to Solve Problems

1a. A gardener is planting the plot below.

He needs 5 rows of seeds.

How much space should he leave between the centre of each row?

D VF

2a. Ellie has 27.45kg of sweets to share equally between 9 jars.

What will be the weight of the sweets in each jar.

D VF

3a. Danny has collected double the weight of conkers compared to Libby.

They have 12.6kg of conkers altogether.

12.6kg		
Danny	Danny	Libby

What weight of conkers did they each collect?

D VF

4a. Create your own word problem for the calculation below.

15.25 ÷ 5 = ☐

Now solve it!

D VF

Division to Solve Problems

1b. The caretaker is painting markers for each class to line up along in the yard.

There are 10 classes.

How much space should she leave between the centre of each line?

D VF

2b. A dance teacher has 18.15 hours to run three classes of equal length.

How long would each class last?

D VF

3b. Eleanor has mixed 2 times as much vanilla dough as chocolate dough.

She has 1.29kg of dough altogether.

1.29kg		
vanilla	vanilla	chocolate

How much chocolate dough does she have?

D VF

4b. Create your own word problem for the calculation below.

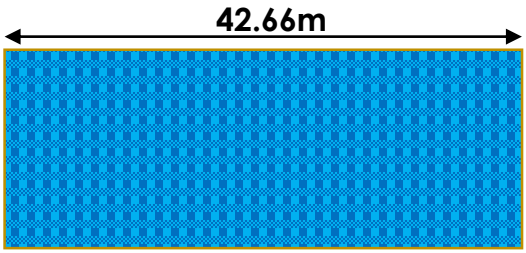
34 ÷ 10 = ☐

Now solve it!

D VF

Division to Solve Problems

5a. A dressmaker has this piece of material.



She needs to make 6 dresses.

How much material does she have for each dress?

E VF

6a. George has 2.16 litres of juice to share equally between nine friends at his party.

How much juice does each friend get?

E VF

7a. Geoff spends £64.75 on trees and flowering bushes.

He spent 4 times as much on trees than on the bushes.

£64.75				
bushes	trees	trees	trees	trees

How much did he spend on each?

E VF

8a. Create your own word problem for the calculation below.

34.4 ÷ 8 = ☐

Now solve it!

E VF

Division to Solve Problems

5b. A painter has a full can of this yellow paint left.

He needs to paint 4 fences.

How much paint will he have for each fence?

E VF

6b. A newsreader has 47 minutes to produce a bulletin with 4 stories of equal length.

How much time does she have for each story?

E VF

7b. Granny used three balls of wool knitting teddies and flowers.

Knitting teddies takes 3 times as much wool as flowers.

3 balls			
flowers	teddies	teddies	teddies

How much wool did she use for flowers?

E VF

8b. Create your own word problem for the calculation below.

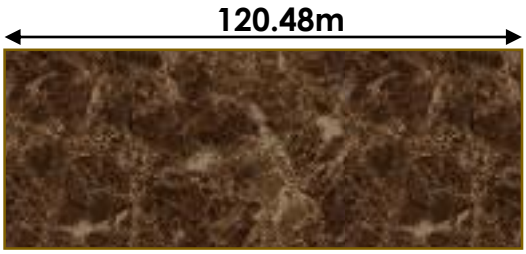
18.99 ÷ 9 = ☐

Now solve it!

E VF

Division to Solve Problems

9a. A builder is planning a row of houses on this piece of land.



He wants to fit 24 houses.

How wide will each house be?

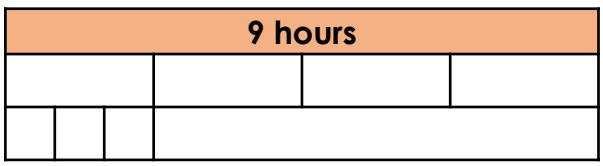
GD VF

10a. Mr. Clough is arranging a football tournament over two days. He has 15 hours to fit in 24 games.

How long will each game be?

GD VF

11a. On a radio station over 9 hours there is 3 times as much music played than talking. The news takes one third of the talking time.



How much time is there for news?

GD VF

12a. Create your own word problem for the calculation below.

35 ÷ 20 = ☐

Now solve it!

GD VF

Division to Solve Problems

9b. A new bookshop is planning its layout and has the following shelf.

Each book is 8cm wide.

How many books can they fit on the shelf?

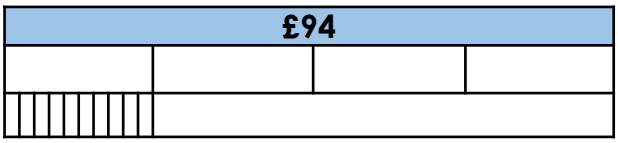
GD VF

10b. The council parks team has 168kg of sand to share between 25 sandpits.

How much sand can each pit have?

GD VF

11b. A pharmacy orders first aid kit stock. They spend £94 on bandages, plasters and gloves. Bandages cost triple the amount of plasters, while gloves are a tenth of the price of plasters.



How much do gloves cost?

GD VF

12b. Create your own word problem for the calculation below.

86 ÷ 16 = ☐

Now solve it!

GD VF

Varied Fluency
Division to Solve Problems

Developing

1a. 5.1cm or 51mm
2a. 3.05kg
3a. Libby 4.2kg, Danny 8.4kg
4a. Various answers, for example:
15.25m of rope is shared between 5 climbers. How much does each climber get? Solution: 3.05m

Expected

5a. 7.11m
6a. 0.24 litres
7a. £12.95 on bushes, £51.80 on trees
8a. Various answers, for example:
A path 34.4m long is to have lavender planted along one side for one eighth of the length. How long will the lavender walk be? Solution: 4.3m

Greater Depth

9a. 5.02m.
10a. 0.625 of an hour
11a. 0.75 hours, 45 mins
12a. Various answers, for example:
35m of thread is used to create 20 cotton bobbins. How much is on each bobbin? Solution: 1.75m

Varied Fluency
Division to Solve Problems

Developing

1b. 1.02m or 102cm
2b. 6.05 hours
3b. 0.43kg
4b. Various answers, for example:
34kg of soil is shared between 10 flower beds. How much does each bed get? Solution: 3.4kg

Expected

5b. 9.5 litres
6b. 11.75 minutes
7b. 0.75 of ball of wool
8b. Various answers, for example:
It costs £18.99 to hire a bus which 9 people share. How much does each person owe? Solution: £2.11

Greater Depth

9b. 93 ÷ 8 = 11.625, so 11 books
10b. 6.72kg per sandpit
11b. £2.35
12b. Various answers, for example:
The park keeper has 86 litres of plant feed to share over 16 flower beds. How much does each bed get? Solution: 5.375 litres