

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 9. Up to one exchange per calculation. Numbers up to 2 decimal places included.

Expected Questions to support using division to solve problems where the divisor is any number up to and including 9. Up to two exchanges per calculation. Numbers have up to 2 decimal places.

Greater Depth Questions to support using division to solve problems where the divisor may be any number up to and including 12. Questions include exchanges. Numbers have up to 2 decimal places. Some questions require a two-step process.

More [Year 6 Decimals](#) resources.

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Division to Solve Problems

1a. A gardener is planting the plot below.



He needs 5 rows of seeds.

How far apart should the rows be?



VF

Division to Solve Problems

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



There are 4 classes.

How far apart should the lines be?



VF

2a. Ellie has 27.69kg of sweets to share equally between three jars.

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



VF

2b. A dance teacher has 6.84 hours to run six classes of equal length.

How long would each class last?



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 Libby collect?



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?



VF

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

$$77.35 \div 7 = \square$$

Now solve it!



VF

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

$$9.68 \div 8 = \square$$

Now solve it!



VF

Division to Solve Problems

5a. A zookeeper has this piece of thick rope for in the monkey enclosure.



He needs to make 6 large rope swings.

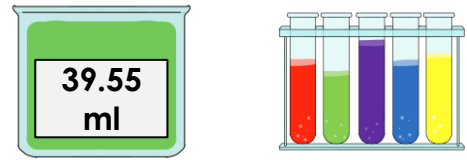
How much rope does he have for each swing?



VF

Division to Solve Problems

5b. A scientist needs to accurately measure out the solution.



She needs to put an equal amount of the solution into each of five test tubes.

How much solution must she put in each test tube?



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?



VF

6b. A newsreader has 59.6 minutes to produce a bulletin with 4 stories of equal length.

How much time does she have for each story?



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 bushes?



VF

7b. Granny used 25.68m of wool knitting teddies and flowers.

Knitting teddies takes 3 times as much wool as flowers.

25.68m			
flowers	teddies	teddies	teddies

How much wool did she use for flowers?



VF

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

$$34.4 \div 8 = \square$$

Now solve it!



VF

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

$$18.97 \div 7 = \square$$

Now solve it!



VF

Division to Solve Problems

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



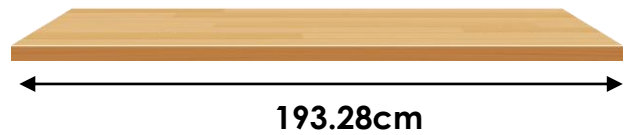
He wants to fit 12 terraces of houses on the land. Each terrace will have three houses. How wide will each terrace and house be?



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? How much longer would the shelf have to be to fit on another book?



VF

10a. Jo and Kai run 82.32km each week. They run the same route every day of the week and each day it takes them 2 hours.

How far do they run each day?
How far do they run each hour?



VF

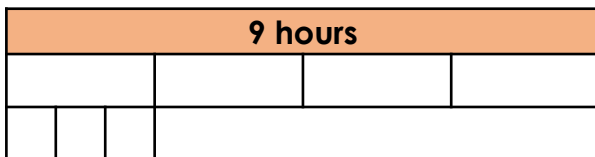
10b. The council parks team has 168.3kg of sand to share between 11 parks and each park has 2 sandpits.

How much sand can each park and sandpit have?



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.

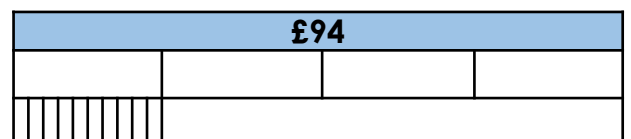


How much time is there for news?



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?



VF

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

$$78.57 \div 9 \times 7 = \square$$

Now solve it!



VF

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

$$814.68 \div 12 \times 8 = \square$$

Now solve it!



VF

Varied Fluency Division to Solve Problems

Developing

- 1a. 5.1cm or 51mm
2a. 9.23kg
3a. Libby 4.2kg
4a. Various answers, for example:
77.35m of rope is shared between 7
climbers. How much does each climber
get? Solution: 11.05m

Expected

- 5a. 7.14m
6a. 0.24 litres
7a. £12.95 on bushes
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. Each terrace is 24.78m wide. Each
house is 8.26m wide.
10a. 11.76km each day and 5.88km each
hour.
11a. 0.75 hours, 45 mins
12a. Various answers, for example:
78.57m of thread is used to create 9
cotton bobbins. How much is on each
bobbin? How much cotton is on 7
bobbins? Solution: 8.73m on each bobbin
so 61.11m is on 7 bobbins.

Varied Fluency Division to Solve Problems

Developing

- 1b. 4.2m or 420cm.
2b. 1.14 hours
3b. 0.43kg
4b. Various answers, for example:
9.68kg of soil is shared between 8 flower
beds. How much does each bed get?
Solution: 1.21kg

Expected

- 5b. 7.91ml
6b. 14.9 minutes
7b. 6.42m on flowers
8b. Various answers, for example:
It costs £18.97 to hire a bus which 7
people share. How much does each
person owe? Solution: £2.71

Greater Depth

- 9b. 24.16 books so 24 books will fit on the
shelf. It would have to be 7.84cm longer to
fit on another book.
10b. 15.3kg of sand per park and 7.65kg
per sandpit
11b. £2.35
12b. Various answers, for example:
Emma has saved £814.68 over a whole
year. How much did she save each
month? How much did she have saved
after 8 months? Solution: £67.89 saved
each month. After 8 months she had
saved £543.12.