

Homework/Extension

Step 10: Calculate Quantities

National Curriculum Objectives:

Mathematics Year 4: (4F10a) [Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number](#)

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)

Developing Match the calculation to the correct whole number when given a fraction of a quantity. Involves unit fractions only.

Expected Match the calculation to the correct whole number when given a fraction of a quantity. Involves non-unit fractions.

Greater Depth Match the calculation to the correct whole number when given a fraction of a quantity. Involves non-unit fractions and the use of related facts.

Questions 2, 5 and 8 (Varied Fluency)

Developing Identify the whole number from a word problem. Involves unit fractions only.

Expected Identify the whole number from a word problem. Involves non-unit fractions.

Greater Depth Identify the whole number from a word problem. Involves non-unit fractions and the use of related facts.

Questions 3, 6 and 9 (Reasoning and Problem Solving)

Developing Identify and explain which statement is correct when finding a whole number from a fraction of a quantity. Involves unit fractions only.

Expected Identify and explain which statement is correct when finding a whole number from a fraction of a quantity. Involves non-unit fractions.

Greater Depth Identify and explain which statement is correct when finding a whole number from a fraction of a quantity. Involves non-unit fractions and the use of related facts.

More [Year 4 Fractions](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

Calculate Quantities

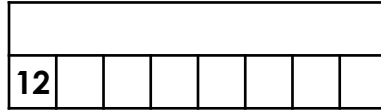
1. Match the calculations to the correct whole number. Use the bar models to help you.

A. $\frac{1}{11}$ of is 6



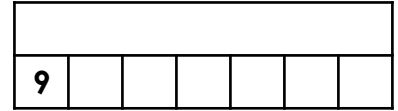
63

B. $\frac{1}{8}$ of is 12



96

C. $\frac{1}{7}$ of is 9



66

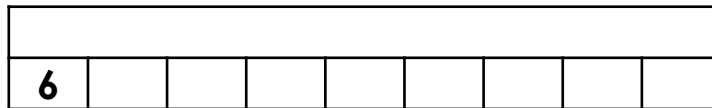


VF
HW/Ext

2. Alfie is putting some candles on a cake.



I have used 6 candles, which is $\frac{1}{9}$ of the packet.



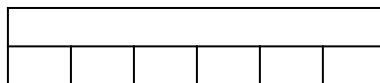
How many candles are left in the packet? Use the bar model to help.



VF
HW/Ext

3. Ben and Sally are working out the missing number in the calculation below.

$\frac{1}{6}$ of = 8



Ben

I think the whole number is 36 because each part of the bar model is 6.

I think the whole number is 48 because one of the parts is 8.



Sally

Who is correct? Convince me.



RPS
HW/Ext

Calculate Quantities

4. Match the calculations to the correct whole number. Use bar models to help you.

A. $\frac{5}{11}$ of is 20

96

B. $\frac{5}{9}$ of is 45

81

C. $\frac{7}{12}$ of is 56

44



VF
HW/Ext

5. George is planting some seeds in his garden.



I have already used forty-five seeds, which is $\frac{5}{12}$ of the packet.

How many seeds are left in the packet?



VF
HW/Ext

6. Evie and Chris are working out the missing number in the calculation below.

$\frac{5}{6}$ of = 60



Evie

The answer is 50. I divide the whole number by the denominator and then multiply by the numerator.

The answer is 72. I divide the whole number by the numerator and then multiply by the denominator.



Chris

Who is correct? Convince me.



RPS
HW/Ext

Calculate Quantities

7. Match the calculations to the correct whole number. Use bar models to help you.

A. $\frac{15}{40}$ of is 36

B. $\frac{14}{18}$ of is 84

C. $\frac{21}{27}$ of is 70

90

108

96



VF
HW/Ext

8. Philippa is putting her books away on a shelf.



I put $\frac{9}{27}$ of the books on the shelf yesterday and $\frac{4}{9}$ away today. In total, I have put 42 books away.

How many books does she still need to put away?



VF
HW/Ext

9. Arthur and Iris are working out the missing number in the calculation below.

$\frac{16}{24}$ of = 56



Arthur

I can use the related fact $\frac{16}{24} = \frac{2}{3}$ to solve the calculation.

I can use the related fact $\frac{16}{24} = \frac{4}{6}$ to solve the calculation.



Iris

Who is correct? Convince me.



RPS
HW/Ext

Homework/Extension

Calculate Quantities

Developing

1. A. 66; B. 96; C. 63
2. There are 48 candles left in the packet.
3. Sally is correct. If 1 part is equal to 8, then the whole must be $6 \times 8 = 48$.

Expected

4. A. 44; B. 81; C. 96
5. There are 63 seeds left in the packet.
6. Chris is correct. The whole must be larger than the part. To find the answer, divide 60 by 5 which is 12 and then multiply by 12 by 6 which equals 72.

Greater Depth

7. A. 96; B. 108; C. 90
8. There are 12 books left to put on the shelf.
9. Both Arthur and Iris are correct because $\frac{16}{24} = \frac{2}{3}$ and $\frac{16}{24} = \frac{4}{6}$ so they are equivalent. This can then be used to solve the calculation. For Arthur, $56 \div 2 = 28$ and $28 \times 3 = 84$. For Iris, $56 \div 4 = 14$ and $14 \times 6 = 84$.