

# FINDING UNITS AND NON-UNIT FRACTIONS OF AN AMOUNT

## USING A BAR MODEL

Name:

Date:

Answer these questions using a bar model to help you and a multiplication square. The first one has been done for you. If you don't have enough room, draw a bar model on a whiteboard and record your work in a sketch on the sheet. Check your answer on your calculator using the fraction key.

Question	Fraction Grid	Answer	Equation	Explain Your Reasoning												
$\frac{1}{4}$ of 8	<table border="1"> <tr> <td colspan="4">8</td> </tr> <tr> <td>..</td> <td>..</td> <td>..</td> <td>..</td> </tr> <tr> <td><math>\frac{1}{4}</math></td> <td><math>\frac{1}{4}</math></td> <td><math>\frac{1}{4}</math></td> <td><math>\frac{1}{4}</math></td> </tr> </table>	8				..	..	..	..	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	2	$8 \div 4 = 2$	Finding a quarter of something is the same as dividing by four. So I am dividing eight by four. The answer is two, so one-quarter of eight is one.
8																
..	..	..	..													
$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$													
$\frac{2}{4}$ of 4	<table border="1"> <tr> <td colspan="4">8</td> </tr> <tr> <td>..</td> <td>..</td> <td>..</td> <td>..</td> </tr> <tr> <td><math>\frac{1}{4}</math></td> <td><math>\frac{1}{4}</math></td> <td><math>\frac{1}{4}</math></td> <td><math>\frac{1}{4}</math></td> </tr> </table>	8				..	..	..	..	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	4	$8 \div 4 = 2$ $2 \times 2 = 2$	I already know that one-quarter of eight is two. I need two-quarters of eight, so I need two lots of two or $2 \times 2$ .
8																
..	..	..	..													
$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$													
$\frac{1}{5}$ of 25																

# FINDING UNITS AND NON-UNIT FRACTIONS OF AN AMOUNT USING A BAR MODEL

Question	Fraction Grid	Answer	Equation	Explain Your Reasoning
$\frac{2}{5}$ of 25				
$\frac{3}{5}$ of 25				
$\frac{4}{5}$ of 25				
$\frac{1}{6}$ of 12				
$\frac{2}{6}$ of 12				
$\frac{3}{6}$ of 12				

# FINDING UNITS AND NON-UNIT FRACTIONS OF AN AMOUNT USING A BAR MODEL

Question	Fraction Grid	Answer	Equation	Explain Your Reasoning
$\frac{4}{6}$ of 12				
$\frac{5}{6}$ of 12				
$\frac{1}{9}$ of 27				
$\frac{2}{9}$ of 27				
$\frac{5}{9}$ of 27				

## Extension Question

What is  $\frac{3}{20}$  of 100? Can you visualise the process and describe what you are doing? Use these prompts.

- I am visualising a bar model. It looks like...

# FINDING UNITS AND NON-UNIT FRACTIONS OF AN AMOUNT

## USING A BAR MODEL

---

- I am sharing counters among the parts. There are too many counters so I need to ...
- I am shading the parts I am interested in. How many parts have you shaded?
- I am counting the counters in the shaded parts. There are too many counters so I need to...
- What is your answer?
- What is the equation to show what you did?