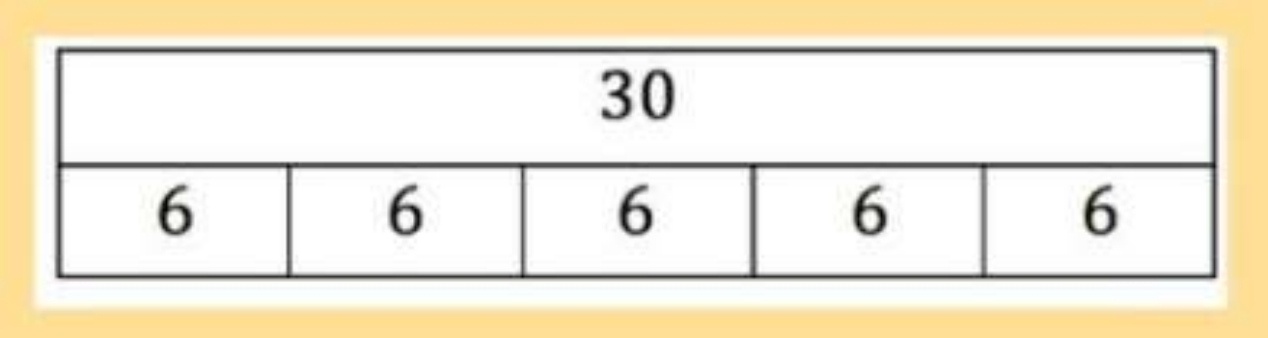
Finding fractions of amounts using bar models

Year 4 Maths week beginning 23rd March 2020

Using the ‘bar model’ method is good for finding fractions!

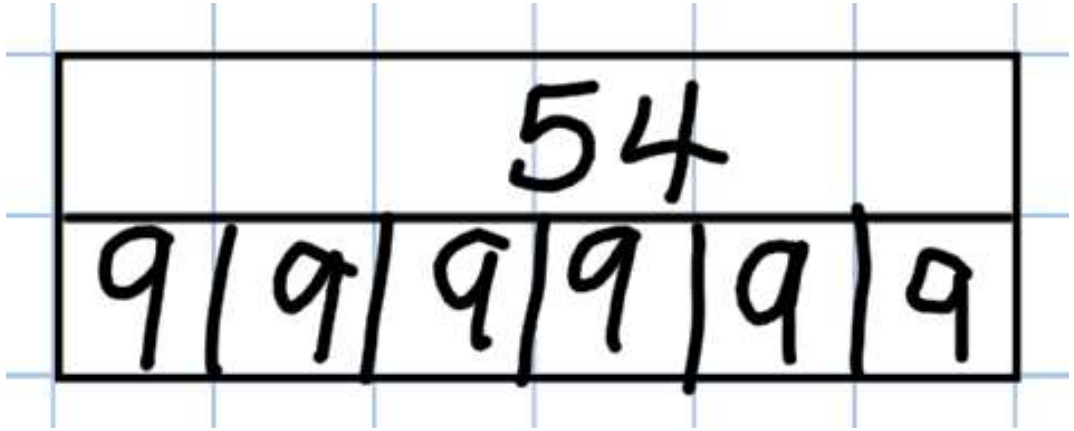


In this example I’m finding fifths:
The whole amount is 30.
There are five boxes to represent 5 parts.

I’ve worked out that 1/5 of 30 is 6, I did this by dividing 30 (the whole) by 5 (one part). The answer was 6.

- In this method, you draw a ‘bar’ with boxes to represent parts of the fraction.
- The top of the bar is the **whole** amount, the bottom of the bar is the **parts**.
- We can use this method to help us find fractions of amounts.

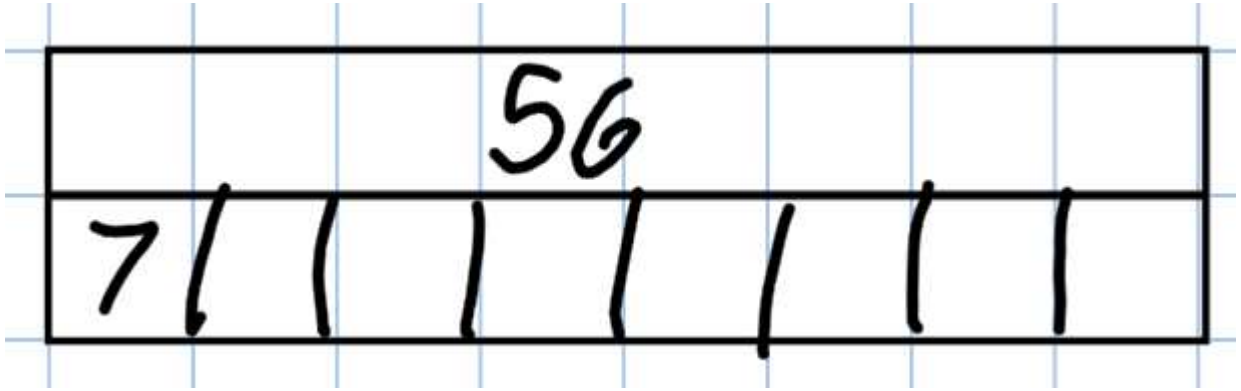
Let’s use a bar model to find sixths…



- I want to find 1/6 of 54. So first I drew a bar with 6 squares to represent sixths. The **whole** bar is 54 so to find 1/6 I **divided** 54 by 6. The answer is 9 so now I know **1/6 of 54 = 9**

- Now I can use my bar to work out: **2/6 of 54 = 18** (I added 9 + 9)
- **4/6 of 54 = 36** (I added 9 + 9 + 9 + 9 or I could also do 9 x 4)

Now let’s use a bar model to find eighths…



- I want to find 1/8 of 56. So first I drew a bar with 8 squares to represent eighths. The **whole** bar is 56 so to find 1/8 I **divided** 56 by 8. The answer is 7 so now I know **1/8 of 56 = 7**

- Now I can use my bar to work out: **2/8 of 56 = 14** (I added 7 + 7)
- **6/8 of 54 = 42** (I added 7 + 7 + 7 + 7 + 7 + 7 or I could do 7 x 6)

Try these questions. You can use a bar model to help you if you want.

Mild

1/3 of 12

2/3 of 12

1/5 of 20

2/5 of 20

1/4 of 36

2/4 of 36

1/10 of 60

2/10 of 60

Spicy

1/5 of 35

2/5 of 35

4/5 of 35

1/7 of 21

2/7 of 21

5/7 of 21

1/8 of 64

2/8 of 64

4/8 of 64

Hot

3/8 of 32

7/9 of 27

5/6 of 42

2/3 of 33

4/9 of 81

7/12 of 48

3/11 of 88

9/10 of 120

5/8 of 72

4/7 of 56

Fancy a challenge? Try these missing numbers!

4/9 of _____ = 36

3/5 of _____ = 33

6/8 of _____ = 12

5/7 of _____ = 15

9/10 of _____ = 54

7/11 of _____ = 49

3/4 of _____ = 27

4/6 of _____ = 12

You could also try…

If this chocolate bar was cut into four equal pieces, how many chunks would be in each piece? ☐

$\frac{1}{4}$ of 24 is ☐

$\frac{3}{4}$ of 24 is ☐

If this chocolate bar was cut into three equal pieces, how many chunks would be in each piece? ☐

$\frac{1}{3}$ of 24 is ☐

$\frac{2}{3}$ of 24 is ☐

If this chocolate bar was cut into six equal pieces, how many chunks would be in each piece? ☐

$\frac{1}{6}$ of 24 is ☐

$\frac{5}{6}$ of 24 is ☐

If this chocolate bar was cut into eight equal pieces, how many chunks would be in each piece? ☐

$\frac{1}{8}$ of 24 is ☐

$\frac{3}{8}$ of 24 is ☐