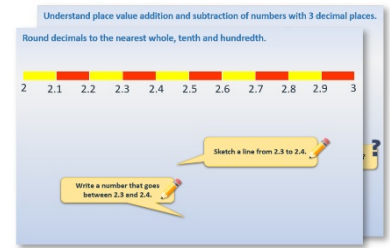


Year 6: Week 2, Day 2

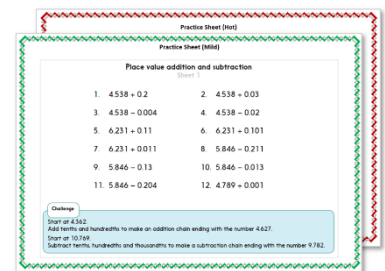
Find fractions of amounts

Each day covers one maths topic. It should take you about 1 hour or just a little more.

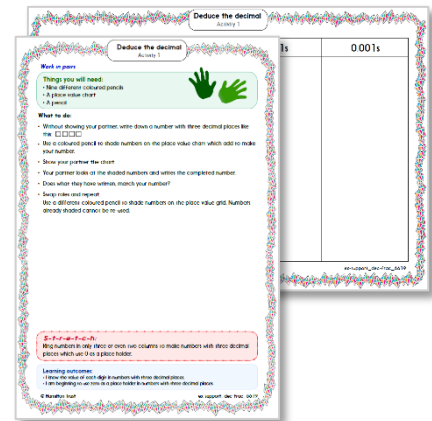
1. Start by reading through the **Learning Reminders**. They come from our *PowerPoint* slides.



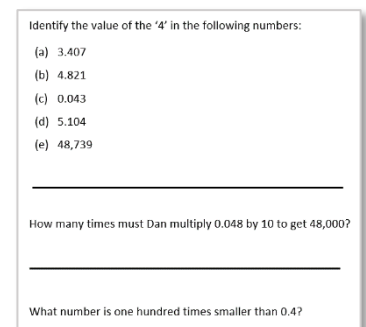
2. Tackle the questions on the **Practice Sheet**. There might be a choice of either **Mild** (easier) or **Hot** (harder)! Check the answers.



3. Finding it tricky? That's OK... have a go with a grown-up at **A Bit Stuck?**



4. Have I mastered the topic? A few questions to **Check your understanding**. Fold the page to hide the answers!



Learning Reminders

Use mental division and multiplication strategies to find fractions of amounts.

$\frac{1}{6}$ of 150

Divide 150 by 6 to find the answer...

$\frac{1}{6}$ of 150 =

$$\begin{array}{r} 25 \\ 6 \overline{) 150} \end{array}$$

So, how could we calculate $\frac{5}{6}$ of 150?

We could multiply **25** by 5, or subtract 25 from 150. Do both to check that you get the same answer...



$\frac{5}{6}$ of 150 = **125**

Learning Reminders

Use mental division and multiplication strategies to find fractions of amounts.

What other fractions of 150
can we find which give
whole-number answers?

HINT! Finding factors of
150 is helpful...

$$\frac{1}{2} \text{ of } 150 = \underline{\hspace{2cm}}$$

$$\frac{1}{3} \text{ of } 150 =$$

$$\frac{1}{5} \text{ of } 150 =$$

$$\frac{1}{10} \text{ of } 150 =$$

$$\frac{1}{30} \text{ of } 150 =$$

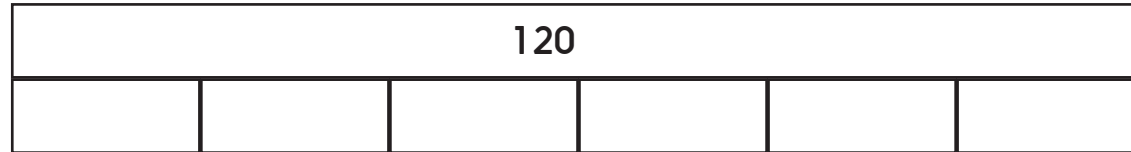
$$\frac{1}{50} \text{ of } 150 =$$

Practice Sheet Mild

Find unit fractions and non-unit fractions of amounts

1. $\frac{1}{6}$ of 120 is

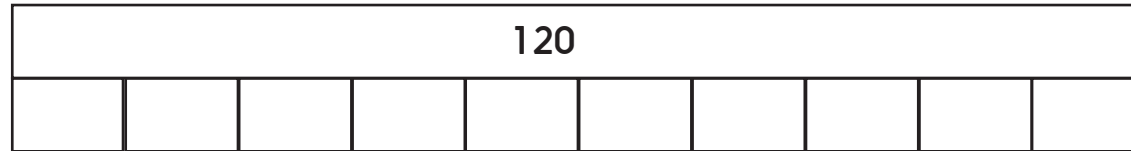
$\frac{5}{6}$ of 120 is



2. $\frac{1}{10}$ of 120 is

$\frac{3}{10}$ of 120 is

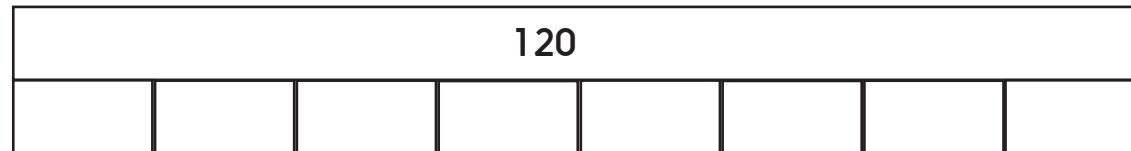
$\frac{9}{10}$ of 120 is



3. $\frac{1}{8}$ of 120 is

$\frac{3}{8}$ of 120 is

$\frac{7}{8}$ of 120 is



Now draw your own bar model to show thirds of 240. Use your bar model to find $\frac{1}{3}$ of 240 and $\frac{2}{3}$ of 240.

Now draw your own bar model to show sixths of 240. Use your bar model to find $\frac{1}{6}$ of 240 and $\frac{5}{6}$ of 240.

Now draw your own bar model to show eighths of 240. Use your bar model to find $\frac{1}{8}$ of 240 and $\frac{5}{8}$ of 240.

Practice Sheet Hot

Find non-unit fractions of amounts

1. $\frac{5}{6}$ of 240
2. $\frac{3}{8}$ of 240
3. $\frac{5}{12}$ of 240
4. $\frac{2}{3}$ of 180
5. $\frac{5}{6}$ of 180
6. $\frac{4}{9}$ of 180
7. $\frac{3}{4}$ of 124
8. $\frac{3}{8}$ of 168
9. Izzy is saving up for a telescope which costs £140. She has saved $\frac{5}{7}$ of the cost. How much has she saved? How much more does she need to save?
10. In a school of 256 children, $\frac{7}{8}$ have school dinners. How many children have school dinners?
11. A supermarket shelf holding 150 eggs collapses. $\frac{1}{6}$ of the eggs are broken. How many eggs are still whole?
12. A snail is crawling 125 metres home. It has crawled $\frac{3}{5}$ of the way. How far is left to crawl home?

Challenge

Write each answer to questions 9-12 as a percentage of the 'whole' amount. You might need to approximate, or write a range as your answer.

Practice Sheet Answers

Find unit fractions and non-unit fractions of amounts (mild)

$\frac{1}{6}$ of 120 is **20**

$\frac{5}{6}$ of 120 is **100**

$\frac{1}{10}$ of 120 is **12**

$\frac{3}{10}$ of 120 is **36**

$\frac{9}{10}$ of 120 is **108**

$\frac{1}{8}$ of 120 is **15**

$\frac{3}{8}$ of 120 is **45**

$\frac{7}{8}$ of 120 is **105**

$\frac{1}{3}$ of 240 is **80**

$\frac{2}{3}$ of 240 is **160**

$\frac{1}{6}$ of 240 is **40**

$\frac{5}{6}$ of 240 is **200**

$\frac{1}{8}$ of 240 is **30**

$\frac{5}{8}$ of 240 is **150**

Find non-unit fractions of amounts (hot)

1. $\frac{5}{6}$ of 240 is **200**.

2. $\frac{3}{8}$ of 240 is **90**.

3. $\frac{5}{12}$ of 240 is **100**.

4. $\frac{2}{3}$ of 180 is **120**.

5. $\frac{5}{6}$ of 180 is **150**.

6. $\frac{4}{9}$ of 180 is **80**.

7. $\frac{3}{4}$ of 124 is **93**.

8. $\frac{3}{8}$ of 168 is **63**.

9. **Izzy has saved £100. She needs another £40.**

10. **224 children have school dinners.**

11. **125 eggs are still whole.**

12. **The snail has another 50 metres left to crawl.**

Challenge

9. **Izzy's £100 is 71.4% of the full £140. Children may say that this is $\frac{100}{140}$ or $\frac{10}{14}$, which $\equiv \frac{5}{7}$. If they find $5 \div 7$ as a short division, the answer is 0.7142, or 71.4%**

10. **$\frac{7}{8} \equiv \frac{175}{200}$, which is equivalent to $\frac{87.5}{100}$ or 87.5%**

11. **83.3%**

12. **$\frac{50}{125} \equiv \frac{2}{5} = 0.4 = 40\%$**

A Bit Stuck? Fraction frenzy

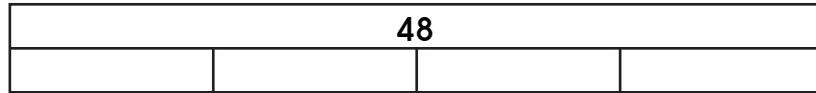
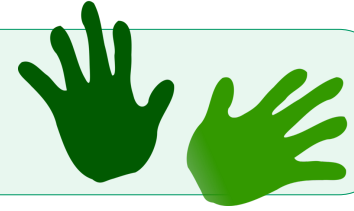
Work in pairs, but write on your own sheet

What to do:

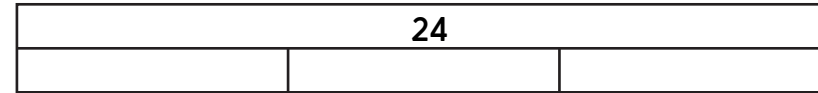
- Work out what number needs to go in each empty section of the bar models. Then write a list of fraction facts to go with each.

Things you will need:

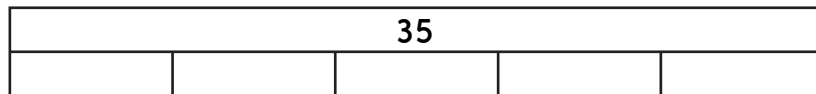
- A pencil



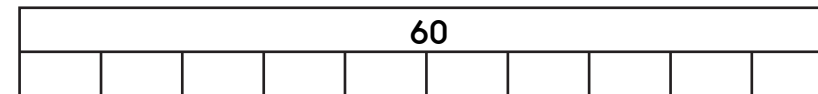
- $\frac{1}{4}$ of 48 is
- $\frac{1}{2}$ of 48 is
- $\frac{3}{4}$ of 48 is
- $\frac{4}{4}$ of 48 is



- $\frac{1}{3}$ of 24 is
- $\frac{2}{3}$ of 24 is
- $\frac{3}{3}$ of 24 is



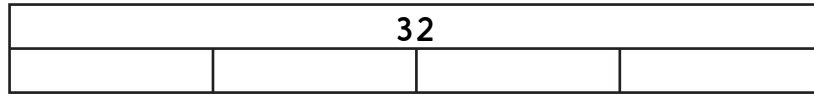
- $\frac{1}{5}$ of 35 is
- $\frac{2}{5}$ of 35 is
- $\frac{3}{5}$ of 35 is
- $\frac{4}{5}$ of 35 is
- $\frac{5}{5}$ of 35 is



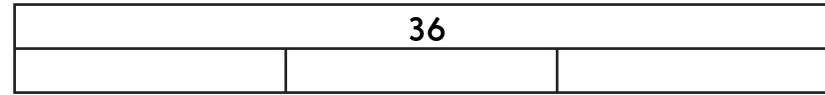
- $\frac{1}{10}$ of 60 is
- $\frac{2}{10}$ of 60 is
- $\frac{3}{10}$ of 60 is
- $\frac{4}{10}$ of 60 is
- $\frac{1}{2}$ of 60 is

- $\frac{6}{10}$ of 60 is
- $\frac{7}{10}$ of 60 is
- $\frac{8}{10}$ of 60 is
- $\frac{9}{10}$ of 60 is
- $\frac{10}{10}$ of 60 is

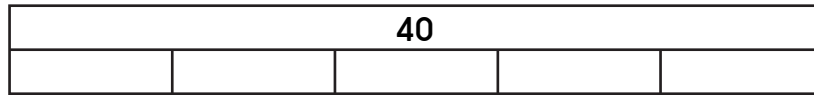
A Bit Stuck? Fraction frenzy



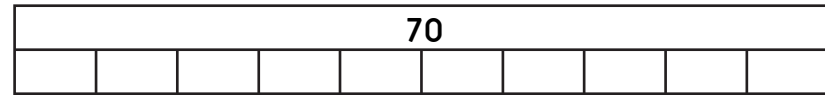
$\frac{1}{4}$ of 32 is
 $\frac{1}{2}$ of 32 is
 $\frac{3}{4}$ of 32 is
 $\frac{4}{4}$ of 32 is



$\frac{1}{3}$ of 36 is
 $\frac{2}{3}$ of 36 is
 $\frac{3}{3}$ of 36 is



$\frac{1}{5}$ of 40 is
 $\frac{2}{5}$ of 40 is
 $\frac{3}{5}$ of 40 is
 $\frac{4}{5}$ of 40 is
 $\frac{5}{5}$ of 40 is



$\frac{1}{10}$ of 70 is
 $\frac{2}{10}$ of 70 is
 $\frac{3}{10}$ of 70 is
 $\frac{4}{10}$ of 70 is
 $\frac{1}{2}$ of 70 is

$\frac{6}{10}$ of 70 is
 $\frac{7}{10}$ of 70 is
 $\frac{8}{10}$ of 70 is
 $\frac{9}{10}$ of 70 is
 $\frac{10}{10}$ of 70 is

S-t-r-e-t-c-h:

Draw your own bar models to show $\frac{1}{10}$ s of 100 and $\frac{1}{4}$ s of 80.

Learning outcomes:

- I can use bar models to find $\frac{1}{3}$ s, $\frac{1}{4}$ s, $\frac{1}{5}$ s and $\frac{1}{10}$ s of numbers.
- I am beginning to draw my own bar models to find fractions of amounts.

Check your understanding

Questions

Find $\frac{1}{5}$ of 280. Now find $\frac{2}{5}$ of 280, $\frac{3}{5}$ and $\frac{4}{5}$.

Find $\frac{1}{7}$ of 504. Now find $\frac{2}{7}$ of 504, $\frac{3}{7}$, $\frac{4}{7}$, $\frac{5}{7}$ and $\frac{6}{7}$.

Show that one fifth of 320 is 3 less than one third of 201?

Fold here to hide answers:

Check your understanding

Answers

Find $\frac{1}{5}$ of 280. Now find $\frac{2}{5}$ of 280, $\frac{3}{5}$ and $\frac{4}{5}$.

$$\frac{1}{5} \text{ of } 280 = 56$$

$$\frac{2}{5} \text{ of } 280 = 112$$

$$\frac{3}{5} \text{ of } 280 = 168$$

$$\frac{4}{5} \text{ of } 280 = 224$$

Find $\frac{1}{7}$ of 504. Now find $\frac{2}{7}$ of 504, $\frac{3}{7}$, $\frac{4}{7}$, $\frac{5}{7}$ and $\frac{6}{7}$.

$$\frac{1}{7} \text{ of } 504 = 72$$

$$\frac{2}{7} \text{ of } 504 = 144$$

$$\frac{3}{7} \text{ of } 504 = 216$$

$$\frac{4}{7} \text{ of } 504 = 288$$

$$\frac{5}{7} \text{ of } 504 = 360$$

$$\frac{6}{7} \text{ of } 504 = 432$$

Show that one fifth of 320 is 3 less than one third of 201.

$$\frac{1}{5} \text{ of } 320 = 320 \div 5 = 64$$

$$\frac{1}{3} \text{ of } 201 = 201 \div 3 = 67$$