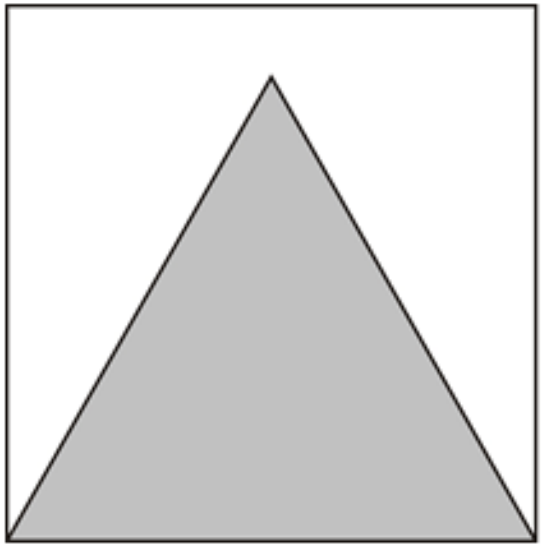
# Spring Two: Week 1.
# Arithmetic.
# Mrs Brown's Group: Thursday.

# You do…

Do these before you put the title or date in your book.

**Q3.**

Here is an equilateral triangle inside a square.



**Not actual size**

The perimeter of the triangle is 48 centimetres.

What is the perimeter of the **square**?

2 marks

# You do…

Do these before you put the title
or date in your book.

**Q4.**

An isosceles triangle has a perimeter of 12 cm.

One of its sides is 5 cm.

What could the length of each of the other two sides be?

Two different answers are possible.

Give **both** answers.

| | | | | |
|---|---|---|---|---|
| | **cm** | and | | **cm** |
| | **cm** | and | | **cm** |

2 marks

# You do…

Do these before you put the title or date in your book.

**Q5.**

Millie has some star-shaped tiles.

Each edge of a tile is 5 centimetres long.


**Not actual size**

She puts two tiles together to make this shape.

Work out the perimeter of Millie's shape.

cm

1 mark

# Answers …

**Q3.**

Award **TWO** marks for the correct answer of 64

If the answer is incorrect, award **ONE** mark for evidence of appropriate working, eg

48 ÷ 3 = 16

16 ÷ 4 = wrong answer

*Calculation must be performed for the award of **ONE** mark.*

**Up to 2 (U1)**

**[2]**

**Q4.**

Award **TWO** marks for two different answers as shown:

| 5 | and | 2 | **or** | 2 | and | 5 |
|---|---|---|---|---|---|---|

**AND**

| 3.5 | and | 3.5 |
|---|---|---|

If the answer is incorrect, award **ONE** mark for any one of the above answers.

***The two answers may be given in either order.***

***Do not** accept '5 and 2' **AND** '2 and 5' for two marks.*

**Up to 2**

**[2]**

**Q5.**

90

**[1]**

Date: Spring two: Week 1.

Title: Arithmetic

| Title | Ingredients |
| --- | --- |
| Arithmetic: Solving Problems involving fractions. | - Identify facts<br>- Step by step approach<br>- Double check facts<br>- Check what you have understood is correct<br>- Check you have answered the question |

**Key words/terminology**: check, logic, methodical, record,

# Solving problems involving fractions.

We do …

# Stage 2 - Vocabulary

Builder 1 has  bricks. She uses  of them to build a small wall. Builder 2 has  bricks. He uses  of them to build a BBQ. Who uses more bricks?

## You do …

# Stage 3 – Number Free Zone

Builder 1 has  bricks. She uses  of them to build a small wall. Builder 2 has  bricks. He uses  of them to build a BBQ. Who uses more bricks?

1. **Vocabulary** - Write a definition for the following words:
   *a) more b) builder*
2. **Retrieval** – What is being built with the bricks?
3. **Inference** – What is the question asking you to do? Summarise the problem.

We do …

## Stage 4 – Answer Free Zone

Builder 1 has 60 bricks. She uses $\frac{3}{5}$ of them to build a small wall. Builder 2 has 150 bricks. He uses $\frac{4}{6}$ of them to build a BBQ. Who uses more bricks?

## Answer:

- **Answer: Builder 2**

## We do …

# Thinking Talk

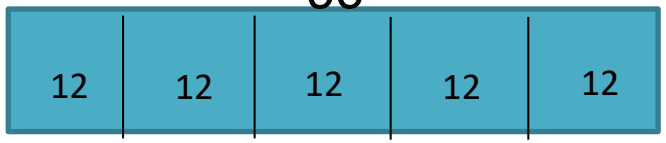
Builder 1 has 60 bricks. She uses $\frac{3}{5}$ of them to build a small wall. Builder 2 has 150 bricks. He uses $\frac{4}{6}$ of them to build a BBQ. Who uses more bricks?

**Answer: Builder 2**

To work out who uses most bricks, I need to work out how many bricks each builder uses.

To calculate **Builder 1**, I need to find $\frac{3}{5}$ of 60.

60




$\frac{3}{5}$ of $60 = 36$

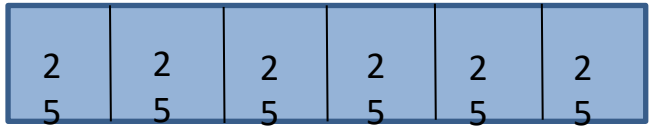
## We do ….

# Thinking Talk

Builder 1 has 60 bricks. She uses $\frac{3}{5}$ of them to build a small wall. Builder 2 has 150 bricks. He uses $\frac{4}{6}$ of them to build a BBQ. Who uses more bricks?

**Answer: Builder 2**

To calculate **Builder 2**, I need to find $\frac{4}{6}$ of 150.




$\frac{4}{6}$ of $150 = 100$

100 > 36 so Builder 2 used the most bricks.

You do …

# Stage 5 – Your Turn

Harry has 480 beads to make a picture. $\frac{2}{6}$ of the beads are red, $\frac{1}{8}$ of the beads are blue. The rest of the beads are other colours. How many more red beads than blue beads are there?

## Answer …

**Answer: 100**

# Model Question 2

# Stage 2 - Vocabulary

Toby reads ____ pages of his magazine on Monday and ____ pages on Tuesday. On Wednesday, he finishes the magazine by reading the remaining ____ of the pages. How many pages did he read on Wednesday?

We do …

# Stage 3 – Number Free Zone

Toby reads ▭ pages of his magazine on Monday and ▭ pages on Tuesday. On Wednesday, he finishes the magazine by reading the remaining ▭ of the pages. How many pages did he read on Wednesday?

1. **Vocabulary** - Write a definition for the following words:
   *a) remaining b) magazine*
2. **Retrieval** – How many days does it take for Toby to read his magazine?
3. **Inference** – What is the question asking you to do? Summarise the problem.

We do …

## Stage 4 - Answer Free Zone

Toby reads 120 pages of his magazine on Monday and 57 pages on Tuesday. On Wednesday, he finishes the magazine by reading the remaining $\frac{2}{5}$ of the pages. How many pages did he read on Wednesday?

Answer …

# Stage 4 - Answer Free Zone

**Answer: 118 pages**

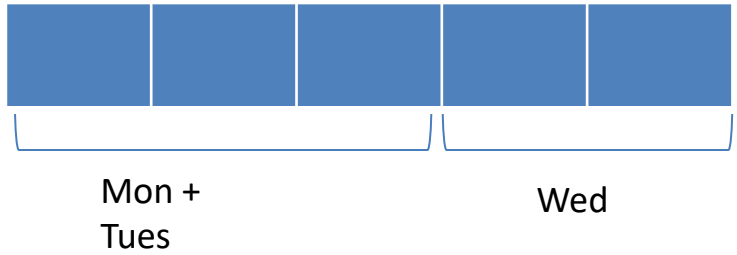
## We do …

# Thinking Talk

Toby reads 120 pages of his magazine on Monday and 57 pages on Tuesday. On Wednesday, he finishes the magazine by reading the remaining $\frac{2}{5}$ of the pages. How many pages did he read on Wednesday?

**Answer: 118 pages**

To begin with, I will draw a bar model.

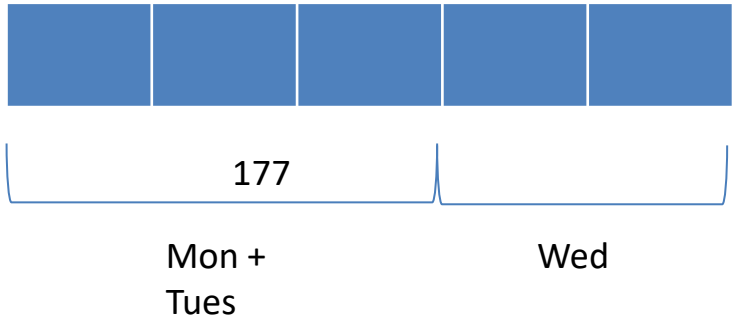



So, if Wednesday represents $\frac{2}{5}$, Toby has already read $\frac{3}{5}$ on Monday and Tuesday. We need to find out how many pages $\frac{1}{5}$ represents.

## We do …

# Thinking Talk

Toby reads 120 pages of his magazine on Monday and 57 pages on Tuesday. On Wednesday, he finishes the magazine by reading the remaining $\frac{2}{5}$ of the pages. How many pages did he read on Wednesday?




177 ÷ 3 = 59
So, 59 pages represents $\frac{1}{5}$ of the total.

59 + 59 = 118 pages read on Wednesday.

**Answer: 118 pages**

# Stage 5 – Your Turn

Tammy cycles 116km on Saturday morning and 40km on Saturday afternoon. On Sunday she finishes by cycling $\frac{1}{5}$ of the journey. How far did Tammy cycle on Sunday?

Answer …

## Stage 5 – Your Turn

**Answer: 39km**

You do …

# Your Turn

A furniture warehouse contains 260 wardrobes and 270 beds. $\frac{3}{4}$ of the wardrobes are sold and $\frac{3}{5}$ of the beds are sold. Which item sold the most? By how many?

A furniture shop sells 106 pieces of furniture on Monday. On Tuesday they sold 59. On Wednesday they sold the rest of their stock before a new delivery by selling $\frac{3}{5}$ of the furniture. How many pieces of furniture did they sell on Wednesday?

**Answers …**

# Your Turn

A furniture warehouse contains 260 wardrobes and 270 beds. $\frac{3}{4}$ of the wardrobes are sold and $\frac{3}{5}$ of the beds are sold. Which item sold the most? By how many?

**33 more Wardrobes.**

A furniture shop sells 106 pieces of furniture on Monday. On Tuesday they sold 59. On Wednesday they sold the rest of their stock before a new delivery by selling $\frac{3}{5}$ of the furniture. How many pieces of furniture did they sell on Wednesday?

**247.5 pieces on Wednesday.**

You do …

# Solving word problems – steps to success

1. **Take Two** – read the question twice, once to get a general idea of context and vocabulary; the second to understand exactly what is being asked.
2. Underline/highlight **key information** (or eliminate information from your enquiries - like a detective!)
3. **Give us a clue** – look for key words to guide you to the operation needed, e.g. *altogether* suggests addition, *share* suggests division etc.
4. **Summarise** – in your head, summarise the question back to yourself, e.g. *So, I've got to add the cost of 3 adults to the cost of a child, then subtract that from £50.00.*

## You do …

# Solving word problems – steps to success

5. **Estimate** – round the numbers to give a rough idea of what the answer should be and jot it down.
6. **Calculate** – make sure you align digits carefully.
8. Read the question back – **have you answered it**?
9. Look  at your original estimate – does your answer seem reasonable?

# The End !!!!