

The following Sample Revision Booklet gives a brief overview of the different topics cover.

Outline for **All** revision booklets:

- Reasoning Behind Booklet
- Extensive Reading List
- Addition Speed Test
- Subtraction Speed Test
- Multiplication Speed Test
- Division Speed Test
- Basic Operations
- Inverse Operations
- Number Work
- Equivalent Fraction, Decimal, Percentage
- Convert Between Fraction/ Decimal/ %
- Doubling, Halving, $\times 10$, $\div 10$
- Conversions/ 3D Shapes/ Maths Facts
- Multiply/ Divide by 10,100,1000
- **3** Maths topics explained with practice questions (Eg: Revision Booklet 3, *Temperature Change, Patterns, Function Machines*)
- English Grammar Definitions
- **3** Grammar Revision Sections
- Synonyms
- Grammar and Spelling
- Answers

Through analysis of the AQE past papers the areas listed above are essential for success in the AQE.

These compliment the AQE practice papers, helping to speed up answering of questions, creating increased efficiency.



STIRLING TUITION
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Revision Booklet 1

(Sample)

Name: _____

| Topic | Completed |
|---|-----------|
| Addition Speed Test (5 mins) | |
| Subtraction Speed Test (5 mins) | |
| Multiplication Speed Test (5 mins) | |
| Division Speed Test (5 mins) | |
| Basic Operations | |
| Inverse Operations | |
| Number Work | |
| Fraction/Decimal/% Equivalents | |
| Convert Between Fraction/ Decimal/ % | |
| Doubling/Halving/ $\div 10$ / $\times 10$ | |
| Conversions/ 3D shapes/ Maths Facts | |
| Multiply/ Divide by 10,100,1000 | |
| Mean/ Range | |
| Area | |
| Triangle Properties | |
| Grammar | |
| Synonyms | |
| Grammar and Spelling | |

The Reasoning behind this booklet

Maths

In maths the **6 pillars** include:

- Times tables
- Basic Operations (with and without decimals)
- Inverse Operations
- Number Work
- Equivalent Fractions/ Decimals/ %
- \times/\div by 10,100,1000, Doubling/ Halving

The booklet starts by practicing these essential maths skills (6 Pillars). These are the foundation that all other maths topics are built upon. **It cannot be stressed enough the importance of quick recall of these 6 pillars.** (Like going to the gym, this will only improve with repetition!)

This is followed by an introduction/ explanation to mathematical topics tested in the AQE. This is coupled with practice questions for revision.

English

The English aspects of the test is very predictable in his format.

- Poem Comprehension/ Grammar (9 marks)
- 5 Mistakes Text (5 Marks)
- Poem Comprehension/ Grammar (9 marks)
- Fiction Text Comprehension/ Grammar (9 marks)

From analysis of the past AQE papers the common questions that arise include:

- Identifying noun, adjective, verb, adverb
- Past/ Present Tense
- Singular/ Plural
- Homophones
- Apostrophe use
- Synonyms (www.freerice.com great website to work on synonyms!!!)
- Comprehension

There is an explanation for all the above topics included in the revision booklet, along with practice questions for revision.

The English sections are the **easiest** (not as many topics to revise) **and hardest** (The people who prepare the test have almost unlimited words to choose from!) **to prepare for**. The biggest indicator of success in the English is how much a child reads. This exposes them to a range of vocabulary, sentence structures, knowledge that just cannot be covered solely in school. **Get them Reading!!!**

Reading List

- David Walliams – eg: Demon Dentist, Awful Aunty, Gangster Granny
- Sir Arthur Conan Doyle - The Lost World, Sherlock Holmes, The Hound of the Baskervilles
- Arthur Ransome - Swallows and Amazons and other books in this series
- C.S Lewis – All of the Narnia Series starting with The Lion, The Witch and the Wardrobe
- Frances Hodgson Burnett - The Secret Garden, A Little Princess
- William Golding - Lord of the Flies
- Brian Jacques – Redwall series
- J.R.R Tolkein - The Lord of the Ring (3 books: The Fellowship of the Ring, The Two Towers, The Return of the King) The Hobbit
- Mark Twain - The Adventures of Huckleberry Finn, The Adventures of Tom Sawyer George Orwell – Animal Farm
- Arthur Ransome – Swallows and Amazons series
- Gerald Durrell – My family and Other Animals, Birds, Beasts and Relatives, A Zoo in my Luggage, Encounters with Animals
- Malorie Blackman – Noughts and Crosses Trilogy, Tell Me No Lies, Thief, Pig Heart Boy
- Susan Coolidge – What Katy Did series
- Roald Dahl books – e.g. The BFG, Charlie and the Chocolate Factory, James and the Giant Peach and others
- Anthony Horowitz – Granny, Alex Rider series, Stormbreaker
- Robin Stevens – Murder Most unladylike
- Anne Holm – I Am David
- Lucy Montgomery – Anne of Green Gables and other books in this series
- Daniel Defoe – Robinson Crusoe
- Laura Ingalls Wilder – Little House on the Prairie series
- E. Nesbit – The Railway Children, The Phoenix and the Carpet, Five Children and It, The Wouldbegoods, The Treasure Seekers
- Michael Morpurgo books – e.g. The Butterfly Lion, War Horse, From Hereabout Hill, Why the Whales Came and others
- Lee Trenton Stewart - The Mysterious Benedict Society and the Perilous Journey, The Mysterious Benedict Society
- Louis Sachar – Holes
- Joan Aiken – Wolves of Willoughby Chase series
- Nina Bawden – Carrie’s War
- Carolyn Keene – Nancy Drew mysteries
- Charles Kingsley – The Water Babies
- Clive King – Stig of the Dump
- Jonathan Swift - Gulliver’s Travels
- Robert Louis Stevenson – Treasure Island, Kidnapped
- Paul Gallico – The Snow Goose, Scruffy
- Kenneth Graham – The Wind in the Willows
- Rudyard Kipling – Jungle Book, Just So Stories
- Eleanor H. Porter – Pollanna
- R.M. Ballantyne – Coral Island
- Anna Sewell – Black Beauty
- Erich Kästner – Emil and the Detectives (good for boy readers)
- Elizabeth Goudge – The Little White Horse
- Johanna Spyri – Heidi
- Noel Stretford – Ballet Shoes, White Boots (good for girl readers)
- Ian Serraillier – The Silver Sword
- Derek Landy – Skulduggery pleasant
- Mary Norton – The Borrowers and other books in this series
- Louisa May Alcott – Little Women
- Lewis Carroll – Alice in Wonderland
- Hugh Lofting – Dr Dolittle
- Eva Ibbotson - The Star of Kazan
- Eoin Colfer - Artemis Fowl series of books
- Richard Adams – Watership Down
- Richmal Crompton - Just William books
- E.B. White – Charlotte’s Web
- Jules Verne – Journey to the Centre of the Earth, Around the World in 80 days
- Robert O’Brian – Mrs Frisby and the Rats of Nimh series of books
- Anne Fine books – e.g. The Flour Babies, Madame Doubtfire
- James Herriot - All Creatures Great and Small
- Yan Martel – The Life of Pi
- Mark Haddon - The Curious Incident of the Dog in the Night Time
- Charlotte Bronte – Jane Eyre
- H.G. Wells – The Time Machine
- Charles Dickens – A Christmas Carol
- D Adams - The Hitchhiker’s Guide to the Galaxy
- J.K. Rowling – Harry Potter series of books
- John Boyne – Boy in the Striped Pyjamas
- Eva Ibbotson - The Star of Kazan
- Jenny Nimmo – Children of the Red King series of books (Charlie Bone)
- Helen Dunmore - Ingo adventures series of books
- Terry Deary – The Fire Thief Fight Back
- Kate DiCamillo - The Miraculous Journey of Edward Tulane
- Snicket, Lemony - A Series of Unfortunate Events series of books
- Jeanne Birdsall - The Penderwicks
- T.H. White – The Sword in the Stone
- Philipa Pearce – Tom’s Midnight Garden
- Susan Coolidge – What Katy Did Next
- Dick-King Smith books – e.g. The Crowstarver, The Sheep Pig
- Ted Hughes – How the Whale Became, The Iron Man
- Robert Muchamore – Cherub book series

Subtraction Speed Test (5 minutes)

Time: _____

Score: _____/100

$$\begin{array}{r} 9 \\ - 3 \\ \hline \end{array} \quad \begin{array}{r} 7 \\ - 5 \\ \hline \end{array} \quad \begin{array}{r} 12 \\ - 5 \\ \hline \end{array} \quad \begin{array}{r} 8 \\ - 3 \\ \hline \end{array} \quad \begin{array}{r} 15 \\ - 3 \\ \hline \end{array} \quad \begin{array}{r} 8 \\ - 4 \\ \hline \end{array} \quad \begin{array}{r} 5 \\ - 4 \\ \hline \end{array} \quad \begin{array}{r} 9 \\ - 1 \\ \hline \end{array} \quad \begin{array}{r} 4 \\ - 3 \\ \hline \end{array} \quad \begin{array}{r} 12 \\ - 8 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ - 8 \\ \hline \end{array} \quad \begin{array}{r} 7 \\ - 0 \\ \hline \end{array} \quad \begin{array}{r} 4 \\ - 3 \\ \hline \end{array} \quad \begin{array}{r} 16 \\ - 8 \\ \hline \end{array} \quad \begin{array}{r} 14 \\ - 6 \\ \hline \end{array} \quad \begin{array}{r} 9 \\ - 9 \\ \hline \end{array} \quad \begin{array}{r} 18 \\ - 3 \\ \hline \end{array} \quad \begin{array}{r} 12 \\ - 7 \\ \hline \end{array} \quad \begin{array}{r} 19 \\ - 5 \\ \hline \end{array} \quad \begin{array}{r} 7 \\ - 5 \\ \hline \end{array}$$

$$\begin{array}{r} 17 \\ - 8 \\ \hline \end{array} \quad \begin{array}{r} 19 \\ - 8 \\ \hline \end{array} \quad \begin{array}{r} 9 \\ - 3 \\ \hline \end{array} \quad \begin{array}{r} 18 \\ - 8 \\ \hline \end{array} \quad \begin{array}{r} 18 \\ - 9 \\ \hline \end{array} \quad \begin{array}{r} 16 \\ - 8 \\ \hline \end{array} \quad \begin{array}{r} 10 \\ - 4 \\ \hline \end{array} \quad \begin{array}{r} 8 \\ - 6 \\ \hline \end{array} \quad \begin{array}{r} 3 \\ - 0 \\ \hline \end{array} \quad \begin{array}{r} 6 \\ - 0 \\ \hline \end{array}$$

$$\begin{array}{r} 17 \\ - 4 \\ \hline \end{array} \quad \begin{array}{r} 4 \\ - 2 \\ \hline \end{array} \quad \begin{array}{r} 7 \\ - 1 \\ \hline \end{array} \quad \begin{array}{r} 18 \\ - 7 \\ \hline \end{array} \quad \begin{array}{r} 10 \\ - 9 \\ \hline \end{array} \quad \begin{array}{r} 8 \\ - 4 \\ \hline \end{array} \quad \begin{array}{r} 15 \\ - 8 \\ \hline \end{array} \quad \begin{array}{r} 9 \\ - 6 \\ \hline \end{array} \quad \begin{array}{r} 8 \\ - 4 \\ \hline \end{array} \quad \begin{array}{r} 9 \\ - 5 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ - 7 \\ \hline \end{array} \quad \begin{array}{r} 15 \\ - 9 \\ \hline \end{array} \quad \begin{array}{r} 10 \\ - 3 \\ \hline \end{array} \quad \begin{array}{r} 14 \\ - 5 \\ \hline \end{array} \quad \begin{array}{r} 4 \\ - 1 \\ \hline \end{array} \quad \begin{array}{r} 13 \\ - 7 \\ \hline \end{array} \quad \begin{array}{r} 5 \\ - 4 \\ \hline \end{array} \quad \begin{array}{r} 9 \\ - 1 \\ \hline \end{array} \quad \begin{array}{r} 9 \\ - 3 \\ \hline \end{array} \quad \begin{array}{r} 17 \\ - 4 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ - 3 \\ \hline \end{array} \quad \begin{array}{r} 12 \\ - 3 \\ \hline \end{array} \quad \begin{array}{r} 9 \\ - 6 \\ \hline \end{array} \quad \begin{array}{r} 13 \\ - 6 \\ \hline \end{array} \quad \begin{array}{r} 14 \\ - 4 \\ \hline \end{array} \quad \begin{array}{r} 6 \\ - 6 \\ \hline \end{array} \quad \begin{array}{r} 15 \\ - 3 \\ \hline \end{array} \quad \begin{array}{r} 18 \\ - 7 \\ \hline \end{array} \quad \begin{array}{r} 8 \\ - 3 \\ \hline \end{array} \quad \begin{array}{r} 14 \\ - 6 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ - 4 \\ \hline \end{array} \quad \begin{array}{r} 7 \\ - 6 \\ \hline \end{array} \quad \begin{array}{r} 12 \\ - 6 \\ \hline \end{array} \quad \begin{array}{r} 7 \\ - 3 \\ \hline \end{array} \quad \begin{array}{r} 13 \\ - 3 \\ \hline \end{array} \quad \begin{array}{r} 19 \\ - 4 \\ \hline \end{array} \quad \begin{array}{r} 7 \\ - 4 \\ \hline \end{array} \quad \begin{array}{r} 9 \\ - 8 \\ \hline \end{array} \quad \begin{array}{r} 11 \\ - 8 \\ \hline \end{array} \quad \begin{array}{r} 6 \\ - 5 \\ \hline \end{array}$$

$$\begin{array}{r} 17 \\ - 9 \\ \hline \end{array} \quad \begin{array}{r} 13 \\ - 5 \\ \hline \end{array} \quad \begin{array}{r} 16 \\ - 5 \\ \hline \end{array} \quad \begin{array}{r} 11 \\ - 6 \\ \hline \end{array} \quad \begin{array}{r} 7 \\ - 4 \\ \hline \end{array} \quad \begin{array}{r} 15 \\ - 5 \\ \hline \end{array} \quad \begin{array}{r} 11 \\ - 6 \\ \hline \end{array} \quad \begin{array}{r} 3 \\ - 2 \\ \hline \end{array} \quad \begin{array}{r} 14 \\ - 9 \\ \hline \end{array} \quad \begin{array}{r} 7 \\ - 5 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ - 5 \\ \hline \end{array} \quad \begin{array}{r} 6 \\ - 2 \\ \hline \end{array} \quad \begin{array}{r} 19 \\ - 3 \\ \hline \end{array} \quad \begin{array}{r} 5 \\ - 5 \\ \hline \end{array} \quad \begin{array}{r} 8 \\ - 0 \\ \hline \end{array} \quad \begin{array}{r} 8 \\ - 6 \\ \hline \end{array} \quad \begin{array}{r} 6 \\ - 2 \\ \hline \end{array} \quad \begin{array}{r} 16 \\ - 9 \\ \hline \end{array} \quad \begin{array}{r} 10 \\ - 5 \\ \hline \end{array} \quad \begin{array}{r} 11 \\ - 3 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ - 0 \\ \hline \end{array} \quad \begin{array}{r} 16 \\ - 6 \\ \hline \end{array} \quad \begin{array}{r} 10 \\ - 3 \\ \hline \end{array} \quad \begin{array}{r} 7 \\ - 1 \\ \hline \end{array} \quad \begin{array}{r} 19 \\ - 9 \\ \hline \end{array} \quad \begin{array}{r} 7 \\ - 5 \\ \hline \end{array} \quad \begin{array}{r} 4 \\ - 2 \\ \hline \end{array} \quad \begin{array}{r} 13 \\ - 7 \\ \hline \end{array} \quad \begin{array}{r} 17 \\ - 6 \\ \hline \end{array} \quad \begin{array}{r} 7 \\ - 5 \\ \hline \end{array}$$

Division Speed Test (5 minutes)

Time: _____

Score: _____/100

| | | | | |
|-----------------|-----------------|-----------------|----------------|-----------------|
| $132 \div 11 =$ | $4 \div 4 =$ | $56 \div 8 =$ | $21 \div 7 =$ | $77 \div 11 =$ |
| $22 \div 11 =$ | $70 \div 7 =$ | $6 \div 2 =$ | $20 \div 5 =$ | $54 \div 6 =$ |
| $40 \div 4 =$ | $48 \div 12 =$ | $72 \div 8 =$ | $10 \div 10 =$ | $55 \div 11 =$ |
| $33 \div 3 =$ | $99 \div 9 =$ | $30 \div 3 =$ | $12 \div 12 =$ | $96 \div 12 =$ |
| $4 \div 2 =$ | $14 \div 2 =$ | $96 \div 8 =$ | $63 \div 7 =$ | $60 \div 12 =$ |
| $20 \div 10 =$ | $16 \div 2 =$ | $100 \div 10 =$ | $66 \div 6 =$ | $63 \div 9 =$ |
| $50 \div 5 =$ | $88 \div 8 =$ | $28 \div 4 =$ | $35 \div 5 =$ | $4 \div 1 =$ |
| $40 \div 8 =$ | $60 \div 5 =$ | $48 \div 6 =$ | $22 \div 2 =$ | $9 \div 9 =$ |
| $10 \div 1 =$ | $48 \div 8 =$ | $8 \div 8 =$ | $9 \div 3 =$ | $110 \div 10 =$ |
| $24 \div 12 =$ | $49 \div 7 =$ | $121 \div 11 =$ | $24 \div 3 =$ | $60 \div 6 =$ |
| $90 \div 9 =$ | $50 \div 10 =$ | $18 \div 9 =$ | $30 \div 6 =$ | $15 \div 5 =$ |
| $12 \div 1 =$ | $5 \div 5 =$ | $45 \div 5 =$ | $56 \div 7 =$ | $18 \div 3 =$ |
| $30 \div 10 =$ | $120 \div 12 =$ | $40 \div 10 =$ | $30 \div 5 =$ | $108 \div 12 =$ |
| $36 \div 4 =$ | $24 \div 6 =$ | $11 \div 11 =$ | $18 \div 6 =$ | $6 \div 6 =$ |
| $77 \div 7 =$ | $108 \div 9 =$ | $36 \div 6 =$ | $9 \div 1 =$ | $20 \div 2 =$ |
| $99 \div 11 =$ | $60 \div 10 =$ | $80 \div 10 =$ | $6 \div 1 =$ | $8 \div 2 =$ |
| $10 \div 2 =$ | $21 \div 3 =$ | $144 \div 12 =$ | $18 \div 2 =$ | $44 \div 4 =$ |
| $24 \div 8 =$ | $15 \div 3 =$ | $42 \div 7 =$ | $27 \div 3 =$ | $84 \div 12 =$ |
| $120 \div 10 =$ | $28 \div 7 =$ | $36 \div 3 =$ | $24 \div 2 =$ | $5 \div 1 =$ |
| $3 \div 3 =$ | $72 \div 12 =$ | $1 \div 1 =$ | $40 \div 5 =$ | $81 \div 9 =$ |

Basic Operations**Addition**

- 1) $495 + 94 =$ _____
2) $2374 + 5872 =$ _____

Subtraction

- 3) $7252 - 379 =$ _____
4) $2432 - 486 =$ _____

Multiplication

- 5) $95 \times 62 =$ _____
6) $42 \times 26 =$ _____

Division

- 7) $5985 \div 5 =$ _____
8) $8578 \div 2 =$ _____

Addition

- 9) $2947 + 1800 =$ _____
10) $7462 + 945 =$ _____

Subtraction

- 11) $9264 - 173 =$ _____
12) $2582 - 2191 =$ _____

Multiplication

- 13) $47 \times 83 =$ _____
14) $91 \times 81 =$ _____

Division

- 15) $9995 \div 5 =$ _____
16) $2597 \div 7 =$ _____

Inverse Operations**Addition**

1) $3487 + \underline{\hspace{2cm}} = 3813$

2) $\underline{\hspace{2cm}} + 429 = 10296$

Subtraction (Be careful if the second number is missing in subtraction!)

3) $\underline{\hspace{2cm}} - 236 = 4360$

4) $6253 - \underline{\hspace{2cm}} = 5410$

Multiplication

5) $36 \times \underline{\hspace{2cm}} = 216$

6) $\underline{\hspace{2cm}} \times 54 = 486$

Division (Be careful if the second number is missing in division!)

7) $\underline{\hspace{2cm}} \div 5 = 167$

8) $96 \div \underline{\hspace{2cm}} = 32$

Addition

9) $7532 + \underline{\hspace{2cm}} = 15823$

10) $\underline{\hspace{2cm}} + 8521 = 18063$

Subtraction (Be careful if the second number is missing in subtraction!)

11) $\underline{\hspace{2cm}} - 295 = 9452$

12) $2524 - \underline{\hspace{2cm}} = 1866$

Multiplication

13) $7 \times \underline{\hspace{2cm}} = 322$

14) $\underline{\hspace{2cm}} \times 9 = 846$

Division (Be careful if the second number is missing in division!)

15) $\underline{\hspace{2cm}} \div 5 = 123$

16) $60 \div \underline{\hspace{2cm}} = 5$

Number WorkSquare Numbers (First 12)

Cubed Numbers (First 5) Triangular Numbers (First 5)

Factors of 12 (6)

12

Prime Numbers (First 10)

Multiples of 25 (First 5)

Equivalent Fraction, Decimal, %

| Fractions | Decimals | Percentages (%) |
|--|----------|-----------------|
| $\frac{1}{2}$ | | 50% |
| $\frac{2}{2} = 1$ | | 100% |
| $\frac{1}{4}$ | | 25% |
| $\frac{2}{4} = \frac{1}{2}$ | | 50% |
| $\frac{3}{4}$ | | 75% |
| $\frac{4}{4} = 1$ | | 100% |
| $\frac{1}{10}$ | 0.1 | |
| $\frac{2}{10} = \frac{1}{5}$ | 0.2 | |
| $\frac{3}{10}$ | 0.3 | |
| $\frac{4}{10} = \frac{2}{5}$ | 0.4 | |
| $\frac{5}{10} = \frac{2}{4} = \frac{1}{2}$ | 0.5 | |
| $\frac{6}{10} = \frac{3}{5}$ | 0.6 | |
| $\frac{7}{10}$ | 0.7 | |
| $\frac{8}{10} = \frac{4}{5}$ | 0.8 | |
| $\frac{9}{10}$ | 0.9 | |
| $\frac{10}{10} = 1$ | 1 | |
| $\frac{1}{3}$ | | 33.33...% |
| $\frac{2}{3}$ | | 66.66...% |
| $\frac{3}{3} = 1$ | | 100% |

Convert Between Fractions, Decimals and Percentages

Refer to Video Tutorial found at:

<https://www.facebook.com/stirlingtuition2017/videos/404719069999568/>

Convert Decimal to Percent

$0.58 =$

$0.16 =$

$0.53 =$

$0.05 =$

$0.11 =$

$0.81 =$

Convert Percent to Decimal

$87 \% =$

$55 \% =$

$50 \% =$

$86 \% =$

$21 \% =$

$34 \% =$

Convert Decimal to Fraction

$0.73 =$

$0.3 =$

$0.8 =$

$0.41 =$

$0.12 =$

$0.55 =$

Convert Fraction to Decimal

$\frac{5}{20} =$

$\frac{6}{10} =$

$\frac{9}{25} =$

$\frac{17}{20} =$

$\frac{9}{20} =$

$\frac{4}{10} =$

Convert Fraction to Percent

$\frac{9}{10} =$

$\frac{3}{25} =$

$\frac{15}{20} =$

$\frac{8}{10} =$

$\frac{6}{20} =$

$\frac{5}{25} =$

Convert Percent to Fraction

$20 \% =$

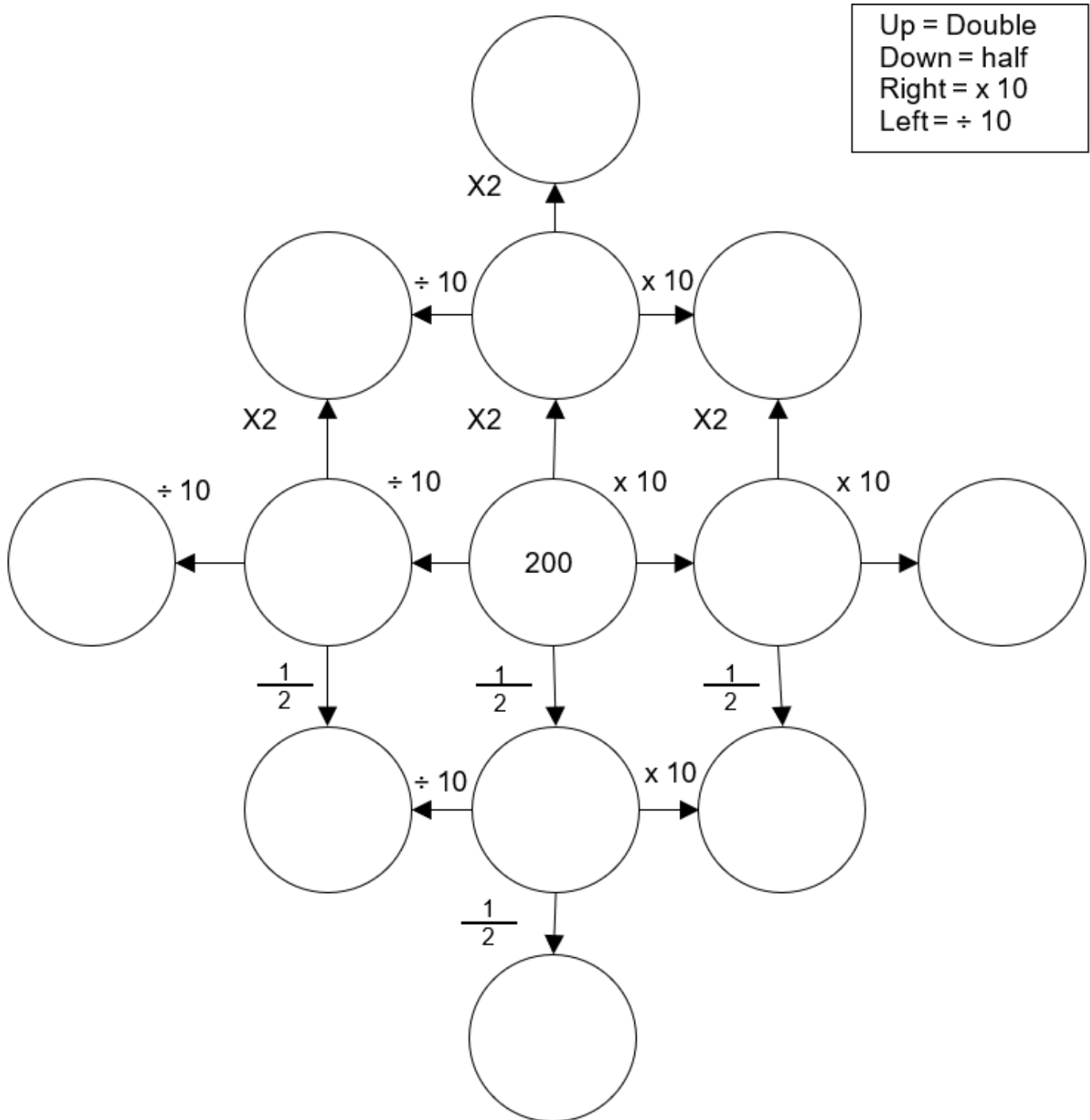
$72 \% =$

$73 \% =$

$65 \% =$

$56 \% =$

$76 \% =$

Doubling/ Halving/ $\div 10$ / $\times 10$ 

Conversions of Measures

| | |
|---------------------|------------------------|
| 1.6 Kilogram (kg) | _____ grams (g) |
| 1.4 Litre (L) | _____ millilitres (ml) |
| 1.8 Kilometer (km) | _____ meters (m) |
| 1.3 meter (m) | _____ millimeters (mm) |
| 1.9 meter (m) | _____ centimeters (cm) |
| 1.7 centimeter (cm) | _____ millimeters (mm) |

3D Shapes Table

| Shape | Faces | Edges | Vertices |
|---------------------------------|-------|-------|----------|
| Cube | | | |
| Cuboid | | | |
| Triangular Prism | | | |
| Cylinder | | | |
| Square based Pyramid | | | |
| Triangular based pyramid | | | |
| Sphere | | | |
| Cone | | | |

Maths Facts

How do work out the area of a triangle? _____

What is the size of an angle in a Full Circle = _____

What is the size of an angle on a straight-line = _____

What is the size of the angles in Triangle = _____

What is a quadrilateral? _____

What is the size of the angles in a quadrilateral = _____

What does Percent mean? _____

How do you work out the fraction of a number? _____

How do you work out volume? _____

Multiply and Divide by 10,100,1000

1) 43.5×100

Answer: _____

2) $39.5 \div 1000$

Answer: _____

3) 5.5×10

Answer: _____

4) $42 \div 10$

Answer: _____

5) 37×10

Answer: _____

6) $18 \div 10$

Answer: _____

7) 27×100

Answer: _____

8) $31.5 \div 10$

Answer: _____

9) 16×100

Answer: _____

10) $10.5 \div 100$

Answer: _____

11) 40.5×1000

Answer: _____

12) $39 \div 100$

Answer: _____

Mean (average) and Range

Explanation of Mean (Average):

To work out the **mean or average** of a set of numbers, simply **add** all the numbers together. Then **divide** the total of the numbers by the number of numbers you added together.

For Example:

1. For a school project, children had to count the number of counters in eight cups. The number of counters in each of the eight cups is given below.

7 5 3 9 11 4 10 7

*a) Calculate the **mean** (average) number of counters in the cups. Write your answer in the space below.*

 8 counters

$$7 + 5 + 3 + 9 + 11 + 4 + 10 + 7 = 56$$

There are 8 numbers:

$$56 \div 8 = 7$$

Mean Reminder: Add and Divide

Explanation of Range:

The **range** is simply the **difference between the largest number and the smallest number.**

For Example:

*b) What is the **range** for the counters in the cups? Write your answer in the space below.*

 8 counters

$$\begin{aligned} \text{Largest} &= 11 \\ \text{Smallest} &= 3 \\ \text{Difference} &= 8 \end{aligned}$$

1. For a business, the owner has to count the number of laptops he has in each of his five stores. The number of laptops in each of his stores is given below.

27 31 24 49 114

a) Calculate the **mean** (average) number of laptops in each store. Write your answer in the space below.

_____ laptops

b) What is the **range** for the laptops? Write your answer in the space below.

_____ laptops

2. A paper boy delivers papers every day of the week. The number of papers he delivers each day is given below. (There is a lot more on Thursday, as it is Spectator day!)

12 15 18 32 11 9 8

a) Calculate the **mean** (average) number of papers the boy delivers each day. Write your answer in the space below.

_____ papers

b) What is the **range** for the papers? Write your answer in the space below.

_____ papers

3. Clare is saving for a holiday. Over five weeks she saves the following amounts.

£24 £19 £36 £102 £64

a) Calculate the **mean** (average) number for how much she saves each week. Write your answer in the space below.

£ _____

b) What is the **range** for the different amounts she saves? Write your answer in the space below.

£ _____

4. Sam has decided to order his comics as his mum keeps complaining they are messing his room. He puts them into 6 different piles. Below is the amount of comics in each pile.

32 24 35 21 42 38

a) Calculate the **mean** (average) number for how many comics are in each pile. Write your answer in the space below.

_____ comics

b) What is the **range** for the different piles of comics? Write your answer in the space below.

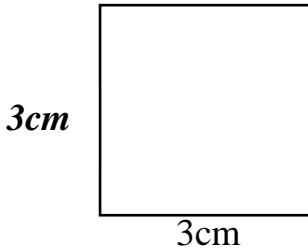
_____ comics

Area

Explanation of Area of Shapes (Squares/ Rectangles):

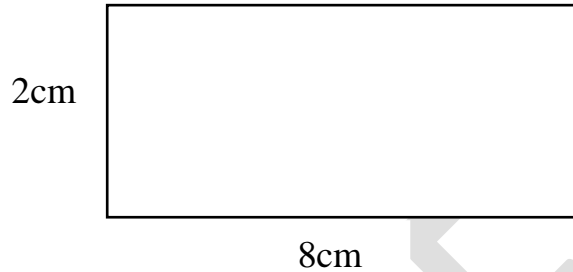
To work out the area of a shape **multiply the length by the width**.

Example:



$$3\text{cm} \times 3\text{cm} = 9\text{cm}^2$$

Area = 9cm²



$$2\text{cm} \times 8\text{cm} = 16\text{cm}^2$$

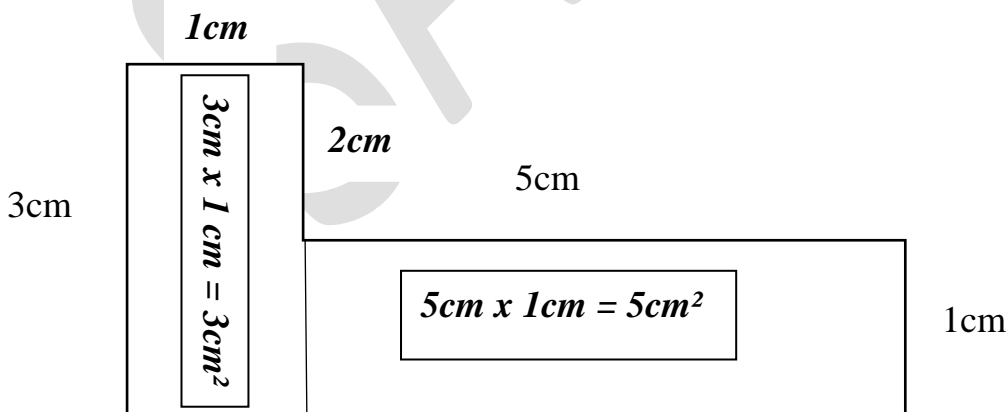
Area = 16cm²

Area Reminder: Multiply

Explanation of Area of Compound Shapes:

- 1) With compound shapes **split** the shape into rectangles and squares.
- 2) Find the missing lengths (**Tip: All the horizontal lines are connected; all the vertical lines are connected**).
- 3) **Find** the **area** of **individual** shapes.
- 4) Then finally **add** the areas.

Example:

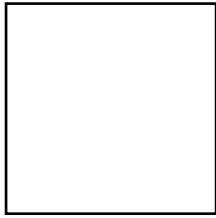


$$3\text{cm}^2 + 5\text{cm}^2 = 8\text{cm}^2$$

Area = 8cm²

Compound Shape Area Reminder: Split-Find Area-Add

1.



4cm

Area = _____

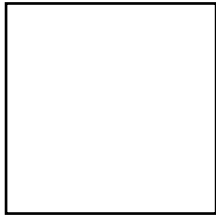
3cm



7cm

Area = _____

2.



9cm

Area = _____

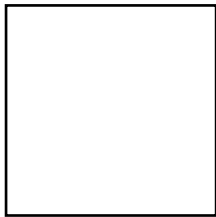
8cm



11cm

Area = _____

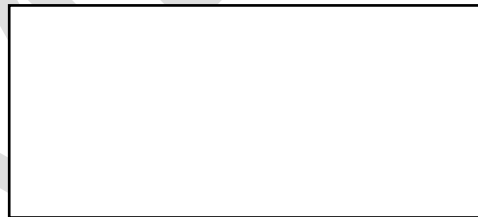
3.



6cm

Area = _____

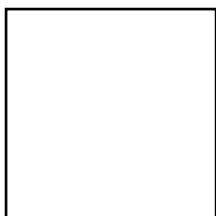
12cm



18cm

Area = _____

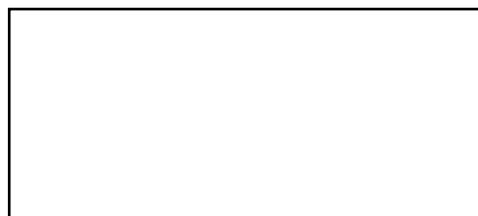
4.



11cm

Area = _____

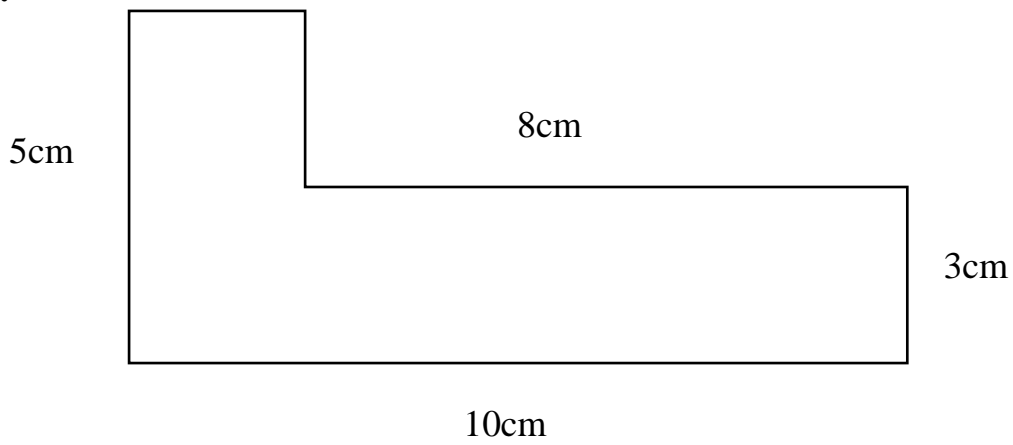
15cm



32cm

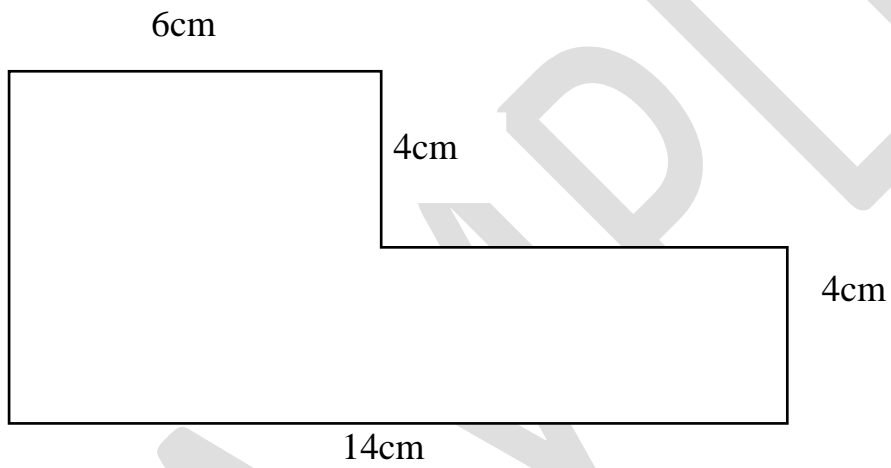
Area = _____

1.



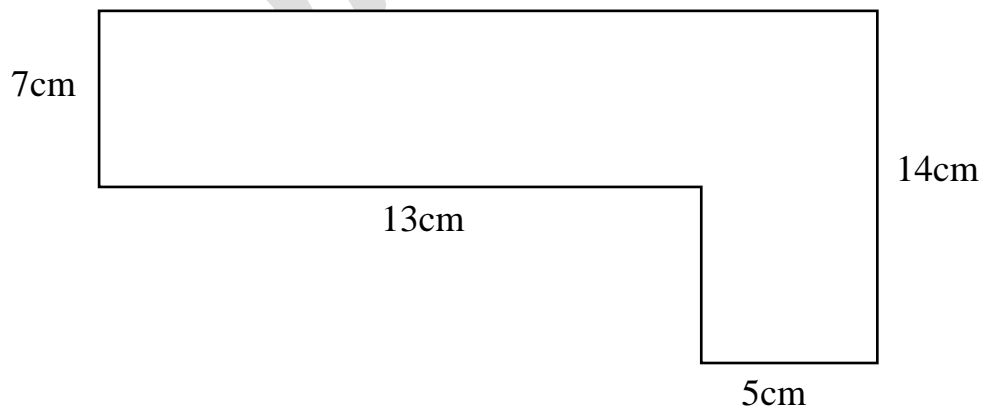
Area = _____

2.



Area = _____

3.



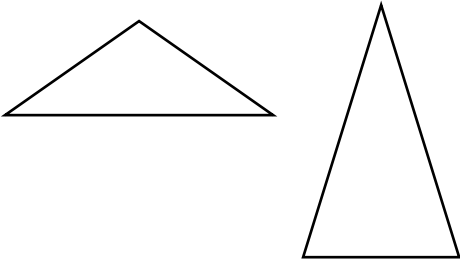
Area = _____

Triangle Properties

Explanation of Area of Triangle Properties:

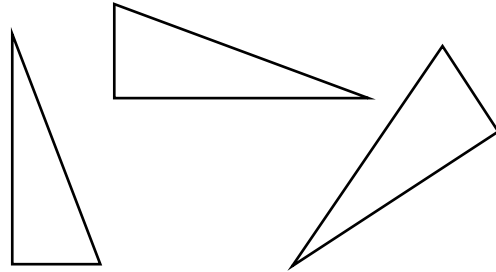
Isosceles Triangle

- Two sides the same length.
- Two angles the same size.



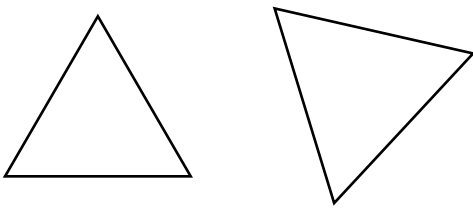
Right Angled Triangle

- Has a Right angle.



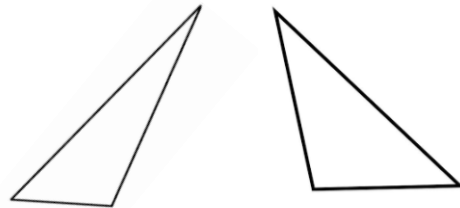
Equilateral Triangle

- All sides the same length.
- All angles the same (60°).

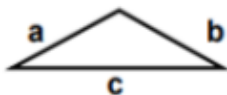


Scalene Triangle

- All sides different lengths.
- All angles different.

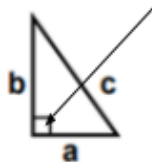


1) (All sides different)



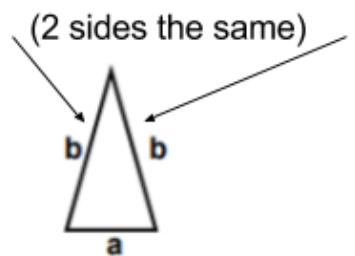
Type: Scalene

2) (Right angle)



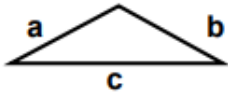
Type: Right angled

5)



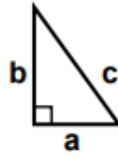
Type: Isosceles

1)



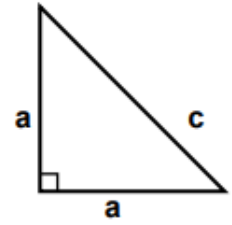
Type: _____

2)



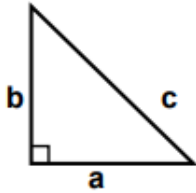
Type: _____

3)



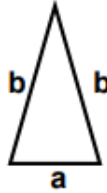
Type: _____

4)



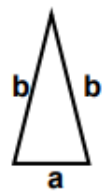
Type: _____

5)



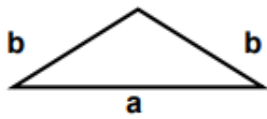
Type: _____

6)



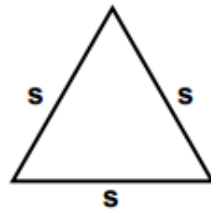
Type: _____

7)



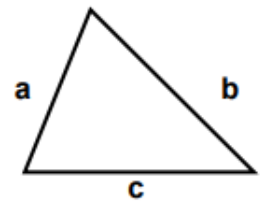
Type: _____

8)



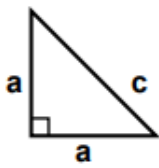
Type: _____

9)



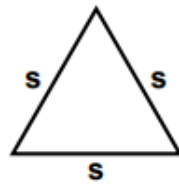
Type: _____

10)



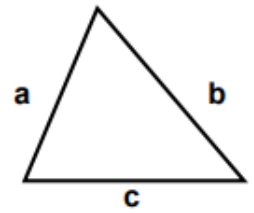
Type: _____

11)



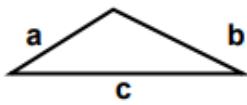
Type: _____

12)



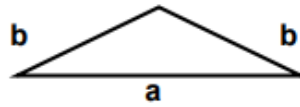
Type: _____

1)



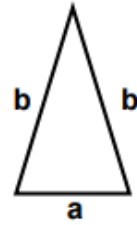
Type: _____

2)



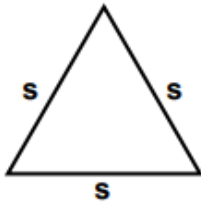
Type: _____

3)



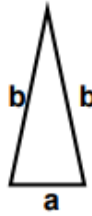
Type: _____

4)



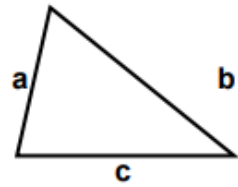
Type: _____

5)



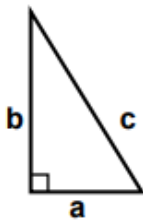
Type: _____

6)



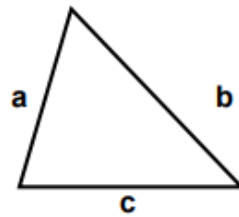
Type: _____

7)



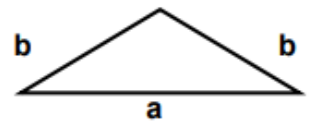
Type: _____

8)



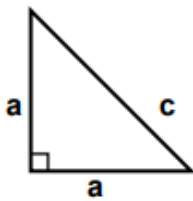
Type: _____

9)



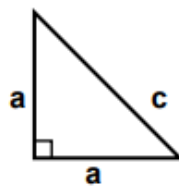
Type: _____

10)



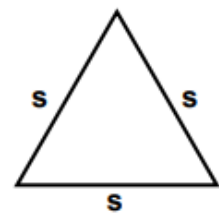
Type: _____

11)



Type: _____

12)



Type: _____

English

Noun:

Person, Place or Thing. E.g.: Sam, Bangor, pencil. Normally these are things you can physically see. There is the exception of **abstract** nouns, which are things, but you can't see them, they are usually feelings or ideas e.g.: courage, happiness etc.

Adjective:

Describes a noun. E.g.: red (adjective) car (noun), happy (adjective) boy (noun), small (adjective) country (noun).

Verb:

Doing/ action word. E.g.: run, play, skip, hold, give, clap, swim etc.

Adverb:

Describes a verb/ action. (Or how you do something.) E.g.: run (verb) quickly (adverb), play (verb) carefully (adverb), skip (verb) leisurely (adverb), clap (verb) loudly (adverb).
Normally adverbs end in 'ly'.

However, there are times when adverbs don't end in 'ly'. E.g.: run (verb) tomorrow (adverb), play (verb) today (adverb), skip (verb) here (adverb), clap (verb) seldom (adverb).

Nouns, Adjectives, Verbs and Adverbs: Understanding context

It is essential that the child understands that the same word can have **different meanings and uses.**

E.g. the word can

Used as a verb: I can play the piano.

Used as a noun: A can of worms.

It is essential that the child can identify the correct definition and use (noun, adjective, verb, adverb) **as it appears in the text.**

Past/ Present Tense

This skill relates to verbs. E.g.: run (Present) ran (Past), clap (present) clapped (past).

Tip: It is best to put yourself in the situation to get the word in the past (**Yesterday I...**) or present (**now**). **E.g.:** I run (present/ **now**), **Yesterday I** ran (past).

Also in the past tense some words are spelled differently of change completely

e.g. skip – skipped
go – went
clap – clapped
see – saw

Plurals Rules

1. Add s

| | |
|------|-------|
| book | books |
| dog | dogs |

2. If the noun **ends in s, x, ch or sh** (hissing sounds) you **add es**

| | |
|--------|----------|
| church | churches |
| fox | foxes |
| glass | glasses |
| brush | brushes |

3. If the noun **ends in y** and the **letter before is a vowel**, you **add s**

| | |
|-----|------|
| key | keys |
| boy | boys |

4. If the noun **ends in y** and the **letter before is not a vowel**, you **change y to i and add es**

| | |
|-------|---------|
| lady | ladies |
| fairy | fairies |

5. Of the noun **ends with f or fe**, you **take the f or fe away and add ves**

| | |
|------|--------|
| calf | calves |
| wife | wives |

But there are exceptions – these need to be learned and remembered.

Exceptions

| | |
|-------|----------------|
| chief | chiefs |
| dwarf | dwarfs/dwarves |
| hoof | hoofs/hooves |
| reef | reefs |
| roof | roofs/rooves |
| scarf | scarf/scarves |

6. If the noun **ends in double ff**, you just **add s**

| | |
|-------|--------|
| cliff | cliffs |
| puff | puffs |

7. If the noun **ends in o**, you **add es**

| | |
|--------|----------|
| potato | potatoes |
| echo | echoes |

But there are exceptions – these need to be learned and remembered.

Exceptions

| | |
|----------|-----------|
| banjo | banjos |
| cuckoo | cuckoos |
| halo | halos |
| igloo | igloos |
| kangaroo | kangaroos |
| photo | photos |
| piano | pianos |
| radio | radios |
| solo | solos |
| studio | studios |
| zoo | zoos |

8. Words which **do not change**

cod
deer
dice
fish
fruit
moose
salmon
sheep
species
squid
trout

9. Words which **change completely**

| | |
|--------|----------|
| child | children |
| foot | feet |
| goose | geese |
| man | men |
| mouse | mice |
| ox | oxen |
| person | people |
| tooth | teeth |
| woman | women |

Homophones

Words which sound the same but have different meanings or spelling. E.g.: week – weak, son – sun, sea – see, their – there – they’re, meet – meat, cell – sell.

Apostrophes

These are used for **possession** and **omission**.

Possession: Apostrophes are used to tell us that something belongs to someone. E.g.: If you were talking about a football belonging to Sam, you would say ‘Sam’s football’. (The football belongs to Sam)

There is only one of Sam, so this is called **singular possession**.

The girl’s hat, John’s car. In these examples there is ONE girl owns ONE hat and John owns ONE car.

If there are **two or more people** owning something, an apostrophe is needed to show **plural possession**.

In this case **the apostrophe goes after the plural owners**, so if a group of girls each own a hat and you want to talk about all these hats, you would say ‘**the girls’ hats, ‘the teachers’ staffroom.**

Tip: Be careful **not** to add apostrophes to **plurals**: E.g.: The dogs ran. Three cars parked.

Omission: If we put two words together and miss out some letters, we need to add an apostrophe where the missing letters are. E.g.: ‘do not’ would change to ‘don’t’, the **contracted form**. These are also called **contraction**. (Squish the words together!)

Synonyms

Words which have the same definition (**Synonym = Same**). E.g.: Happy = cheerful, joyful, delighted. Sad = dejected, miserable, down

Compound Words

This is often worth 2 marks, so a quick recall and understanding of compound words can save time and add points.

E.g. wash + out = washout
out + side = outside

As with everything, extensive reading will help with this task as reading expands the child’s vocabulary and they will be quicker to identify the compound words.

Suffixes and Prefixes

A suffix is something which is added to the **end** of a word:

fear – fear**less**
care - care**ful**

A prefix is something which is added to the start of a word:

understanding – **mis**understanding
certain – **unc**ertain

Antonyms – opposites

These questions are usually worth 2 marks so it is worth going over opposites with the child. Quick recall of opposites will save valuable time when scanning the text for the answers.

Poetic Techniques:

Alliteration: where two or more words, having the same consonant sound, occur close together. E.g. Lazy lizards lying like lumps.

NB be sure that the child understands that alliteration applies to **consonants only!**

(Assonance is the repetition of vowel sounds and, as yet, this has not appeared in the AQE papers, only alliteration).

Onomatopoeia: words which suggest the sounds they refer to. E.g. buzz, chirp, hiss, roar

Rhyme Patterns: identifying the rhyme pattern of a poem

Twinkle, twinkle little star,
How I wonder what you are.
Up above the world so high,
Like a diamond in the sky.

These questions are sometimes worth 2 marks, which should be easy to pick up if the child can identify rhyme patterns easily.

Similes – being able to identify similes

Similes use the words **like and as:**

She sings like an angel

As black as soot

As busy as a bee

He swims like a fish

Spelling – this is tested in the 5 Mistakes Text but **ALSO in the comprehension sections**

With particular reference to:

use of y or i – mith or myth?

Endings - er/ar/or – creator or creater?

al or el – personal or personel?

ent or ant – permanent or permenant?

Double consonants – cc – succeed or succeed?

tt - patern or pattern?

ff – dificult or difficult?

mm – swiming or swimming?

use of ei or ie - theif or thief?

General Grammar Mistakes

Often, there are questions to test whether a child is aware of common grammar mistakes, so it is always best to go know the difference between:

its and it's

its (no apostrophe) possessive: The dog licked its bone.

it's (apostrophe) contraction – shortened version of it is: It's very cold today.

are and our

are – plural and 2nd person singular of the present tense of **the verb be**

They are going to the park.

our – possessive

Would you like to come to our house?

there, they're and their

there – There is a swimming pool in our town.

their – The children collected their coats.

they're – short for they are – They're going to the cinema today.

your and you're

your – Tuck in your shirt!

You're – short for you are – You're going to hurt yourself.

Comprehension

Close reading is essential

The child will be asked to identify whether a statement is true, false or unknown (don't know) based on the text in front of them. Often, the difference between getting the question right or wrong depends on noticing a subtle detail. Therefore, close reading of the questions and the text should be practised.

In Every AQE paper there is two poems and a narrative text. These test comprehension along with all the above skills mentioned in this English section. To improve this aspect of the test there is no substitute for reading. **There is a direct correlation between the success in the comprehension and the amount children read.** (*Refer to reading list at beginning of Booklet*)

Tick the correct word type

| | verb | noun | adjective | adverb |
|---------|------|------|-----------|--------|
| house | | | | |
| swiftly | | | | |
| happy | | | | |
| smile | | | | |

Past/ Present Tense

Look at the 4 words below. Write the **past tense** of each of the words in the space provided.

Be careful with your spelling.

take _____
 know _____
 bring _____
 write _____

Singular/ Plural

Write the **plural** of each of the words below in the space provided. **Be careful with your spelling.**

box _____
 calf _____
 foot _____
 goose _____

Homophones: Circle the correct homophone for the sentence.

I do not **know/ no** your name.

Do you live over **there/ their**?

The **whether/ weather** has been great this month.

My shed is made of **steel/ steal**.

Apostrophes: Add the apostrophe to ensure the sentences are grammatically correct.

The babys name was very unusual.

The childrens competition was won by a 5-year-old.

Last months profits were disappointing.

The postmens bags were extremely heavy.

Tick the correct word type

| | noun | verb | adjective | adverb |
|---------|------|------|-----------|--------|
| wander | | | | |
| quickly | | | | |
| brush | | | | |
| floppy | | | | |

Past/ Present Tense

Look at the 4 words below. Write the **present tense** of each of the words in the space provided.

Be careful with your spelling.

stood _____
 met _____
 lost _____
 built _____

Singular/ Plural

Write the **plural** of each of the words below in the space provided. **Be careful with your spelling.**

church _____
 child _____
 edge _____
 elf _____

Homophones: Circle the correct homophone for the sentence.

Have you **red/ read** this book before?

Do you know **where/ were** Sam has gone?

Butter is **maid/ made** from milk.

Brides often cover **their/ there** face with a **vale/ veil**.

Apostrophes: Add the apostrophe to ensure the sentences are grammatically correct.

Martins homework was excellent.

The students attitude to their work was excellent.

Do you know where Mikes son is?

The salesmens party was cancelled.

Tick the correct word type

| | noun | verb | adverb | adjective |
|--------|------|------|--------|-----------|
| slowly | | | | |
| ran | | | | |
| warm | | | | |
| bath | | | | |

Past/ Present Tense

Look at the 4 words below. Write the **past tense** of each of the words in the space provided.

Be careful with your spelling.

bite _____
 build _____
 eat _____
 freeze _____

Singular/ Plural

Write the **plural** of each of the words below in the space provided. **Be careful with your spelling.**

memo _____
 knife _____
 mouse _____
 hero _____

Homophones: Circle the correct homophone for the sentence.

Some dogs have **there/ their tales/ tails** removed.

When children **our/ are** ill they look very **pail/ pale**.

I have a **whole/ hole** in my bucket.

A **leak/ leek** is a vegetable not a fruit.

Apostrophes: Add the apostrophe to ensure the sentences are grammatically correct.

When youve run the race give me a call.

Its important to check the water in your car.

In the supermarket hes bought a sandwich and drink.

Please, please, please dont do that!

Synonyms

(Note: Throughout this section use a thesaurus if required.)

1. Find a second word with a similar meaning to the word in **bold**:

- a) **GRADUAL** – momentary, slight, happening fast, happening slowly
- b) **INTERFERENCE** – mistake, misunderstanding, expansion, interruption
- c) **PROMPT** – payment, late, occasional, immediate
- d) **SOLITARY** – weep, alone, quiet, timid
- e) **PROCEEDED** – followed, attacked, continued, hurried
- f) **ACTUALLY** – possibly, likely, probably, really

2. Write down a synonym for each word (Use a thesaurus if you need to):

- | | |
|-------------------|--------------------|
| a) liberty _____ | b) delicious _____ |
| c) curious _____ | d) dull _____ |
| e) tremble _____ | f) leap _____ |
| g) strike _____ | h) hungry _____ |
| i) peculiar _____ | j) tease _____ |

3. Match up the synonyms in the list:

- | | | | |
|-------|----------|----------|------------|
| round | correct | speedy | courageous |
| right | circular | mournful | hard |
| brave | gloomy | rapid | difficult |

4. Can you find four different synonyms of **anger**? E.g. start with 'crossness'

- | | |
|----------|----------|
| 1. _____ | 2. _____ |
| 3. _____ | 4. _____ |

Plurals

Write the **plurals** of the following words in the spaces provided. **Remember your plural rules and exceptions.**

| | | | |
|--------|-------|----------|-------|
| cat | _____ | cuff | _____ |
| fox | _____ | kangaroo | _____ |
| turkey | _____ | fish | _____ |
| pony | _____ | mouse | _____ |
| calf | _____ | | |

Opposites

Write the opposites of the following words in the spaces provided.

| | | | |
|--------|-------|-------|-------|
| above | _____ | cheap | _____ |
| bright | _____ | deep | _____ |
| busy | _____ | dead | _____ |

Compound Words

Look at the five words below. From this list choose the best word that makes a compound word when written in one of the spaces below. Each word can be used only once.

time not ball where come

base _____
 some _____
 can _____
 life _____
 be _____

Prefixes (goes before a word)

Look at the five prefixes below. Use these prefixes to create the words opposite in meaning to the words listed below. Each prefix can only be used once.

un mis ir il in

| | | | |
|--------|-------|----------|-------|
| behave | _____ | correct | _____ |
| legal | _____ | rational | _____ |
| happy | _____ | | |

Spelling

Look at the five pairs of words below. Circle the correct spelling in each pair.

| | |
|-------------|-------------|
| apparant | apparent |
| environment | environmant |
| government | governmant |
| independant | independent |
| persistant | persistent |

Answers

Page 4

| | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 19 | 14 | 8 | 15 | 10 | 10 | 11 | 11 | 14 | 16 |
| + 3 | + 8 | + 4 | + 8 | + 3 | + 8 | + 9 | + 8 | + 3 | + 7 |
| 22 | 22 | 12 | 23 | 13 | 18 | 20 | 19 | 17 | 23 |
| 3 | 8 | 17 | 18 | 3 | 15 | 14 | 17 | 10 | 10 |
| + 8 | + 4 | + 4 | + 6 | + 5 | + 3 | + 6 | + 8 | + 4 | + 9 |
| 11 | 12 | 21 | 24 | 8 | 18 | 20 | 25 | 14 | 19 |
| 5 | 7 | 9 | 13 | 6 | 7 | 4 | 13 | 8 | 11 |
| + 9 | + 6 | + 7 | + 5 | + 6 | + 9 | + 7 | + 9 | + 5 | + 3 |
| 14 | 13 | 16 | 18 | 12 | 16 | 11 | 22 | 13 | 14 |
| 15 | 8 | 19 | 6 | 14 | 16 | 5 | 17 | 16 | 18 |
| + 6 | + 8 | + 5 | + 9 | + 8 | + 8 | + 4 | + 4 | + 8 | + 3 |
| 21 | 16 | 24 | 15 | 22 | 24 | 9 | 21 | 24 | 21 |
| 9 | 12 | 13 | 3 | 18 | 15 | 15 | 9 | 18 | 7 |
| + 6 | + 9 | + 5 | + 9 | + 4 | + 3 | + 5 | + 4 | + 9 | + 7 |
| 15 | 21 | 18 | 12 | 22 | 18 | 20 | 13 | 27 | 14 |
| 4 | 4 | 16 | 6 | 9 | 14 | 7 | 12 | 17 | 19 |
| + 4 | + 5 | + 8 | + 5 | + 7 | + 5 | + 4 | + 7 | + 4 | + 6 |
| 8 | 9 | 24 | 11 | 16 | 19 | 11 | 19 | 21 | 25 |
| 10 | 5 | 10 | 18 | 8 | 5 | 16 | 11 | 16 | 6 |
| + 9 | + 4 | + 5 | + 8 | + 3 | + 7 | + 4 | + 7 | + 6 | + 5 |
| 19 | 9 | 15 | 26 | 11 | 12 | 20 | 18 | 22 | 11 |
| 12 | 19 | 9 | 7 | 3 | 19 | 8 | 12 | 18 | 13 |
| + 5 | + 9 | + 7 | + 8 | + 6 | + 9 | + 3 | + 7 | + 6 | + 9 |
| 17 | 28 | 16 | 15 | 9 | 28 | 11 | 19 | 24 | 22 |
| 19 | 17 | 9 | 6 | 13 | 17 | 15 | 13 | 4 | 3 |
| + 6 | + 6 | + 8 | + 7 | + 5 | + 3 | + 5 | + 7 | + 9 | + 3 |
| 25 | 23 | 17 | 13 | 18 | 20 | 20 | 20 | 13 | 6 |
| 3 | 4 | 11 | 5 | 5 | 11 | 4 | 12 | 6 | 12 |
| + 6 | + 3 | + 3 | + 7 | + 3 | + 6 | + 4 | + 7 | + 7 | + 5 |
| 9 | 7 | 14 | 12 | 8 | 17 | 8 | 19 | 13 | 17 |

Page 6

| | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|
| 2 | 5 | 12 | 4 | 2 | 7 | 10 | 2 | 4 | 4 |
| x 11 | x 4 | x 5 | x 3 | x 10 | x 5 | x 10 | x 12 | x 5 | x 1 |
| 22 | 20 | 60 | 12 | 20 | 35 | 100 | 24 | 20 | 4 |
| 6 | 4 | 1 | 8 | 9 | 4 | 9 | 4 | 8 | 10 |
| x 12 | x 6 | x 3 | x 11 | x 2 | x 1 | x 10 | x 7 | x 12 | x 12 |
| 72 | 24 | 3 | 88 | 18 | 4 | 90 | 28 | 96 | 120 |
| 10 | 7 | 2 | 11 | 7 | 7 | 8 | 10 | 10 | 5 |
| x 12 | x 11 | x 6 | x 1 | x 5 | x 12 | x 6 | x 6 | x 6 | x 12 |
| 120 | 77 | 12 | 11 | 35 | 84 | 48 | 60 | 60 | 60 |
| 12 | 4 | 8 | 4 | 8 | 12 | 10 | 5 | 11 | 8 |
| x 11 | x 3 | x 5 | x 3 | x 3 | x 2 | x 6 | x 4 | x 3 | x 12 |
| 132 | 12 | 40 | 12 | 24 | 24 | 60 | 20 | 33 | 96 |
| 11 | 8 | 8 | 3 | 3 | 4 | 1 | 6 | 4 | 3 |
| x 1 | x 9 | x 7 | x 3 | x 12 | x 1 | x 3 | x 12 | x 3 | x 12 |
| 11 | 72 | 56 | 9 | 36 | 4 | 3 | 72 | 12 | 36 |
| 8 | 10 | 1 | 1 | 6 | 8 | 6 | 11 | 5 | 8 |
| x 2 | x 5 | x 1 | x 8 | x 7 | x 5 | x 5 | x 1 | x 7 | x 10 |
| 16 | 50 | 1 | 8 | 42 | 40 | 30 | 11 | 35 | 80 |
| 9 | 3 | 2 | 3 | 11 | 3 | 8 | 2 | 11 | 3 |
| x 3 | x 9 | x 12 | x 3 | x 6 | x 8 | x 6 | x 7 | x 10 | x 7 |
| 27 | 27 | 24 | 9 | 66 | 24 | 48 | 14 | 110 | 21 |
| 9 | 2 | 10 | 10 | 9 | 5 | 7 | 7 | 7 | 6 |
| x 9 | x 5 | x 10 | x 6 | x 9 | x 7 | x 9 | x 9 | x 1 | x 10 |
| 81 | 10 | 100 | 60 | 81 | 35 | 63 | 63 | 7 | 60 |
| 9 | 4 | 2 | 11 | 10 | 8 | 8 | 1 | 6 | 7 |
| x 10 | x 2 | x 3 | x 5 | x 2 | x 6 | x 2 | x 8 | x 5 | x 6 |
| 90 | 8 | 6 | 55 | 20 | 48 | 16 | 8 | 30 | 42 |
| 9 | 3 | 9 | 9 | 7 | 5 | 3 | 8 | 3 | 3 |
| x 8 | x 7 | x 7 | x 9 | x 7 | x 11 | x 4 | x 4 | x 5 | x 2 |
| 72 | 21 | 63 | 81 | 49 | 55 | 12 | 32 | 15 | 6 |

Page 5

| | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 9 | 7 | 12 | 8 | 15 | 8 | 5 | 9 | 4 | 12 |
| - 3 | - 5 | - 5 | - 3 | - 3 | - 4 | - 4 | - 1 | - 3 | - 8 |
| 6 | 2 | 7 | 5 | 12 | 4 | 1 | 8 | 1 | 4 |
| 9 | 7 | 4 | 16 | 14 | 9 | 18 | 12 | 19 | 7 |
| - 8 | - 0 | - 3 | - 8 | - 6 | - 9 | - 3 | - 7 | - 5 | - 5 |
| 1 | 7 | 1 | 8 | 8 | 0 | 15 | 5 | 14 | 2 |
| 17 | 19 | 9 | 18 | 18 | 16 | 10 | 8 | 3 | 6 |
| - 8 | - 8 | - 3 | - 8 | - 9 | - 8 | - 4 | - 6 | - 0 | - 0 |
| 9 | 11 | 6 | 10 | 9 | 8 | 6 | 2 | 3 | 6 |
| 17 | 4 | 7 | 18 | 10 | 8 | 15 | 9 | 8 | 9 |
| - 4 | - 2 | - 1 | - 7 | - 9 | - 4 | - 8 | - 6 | - 4 | - 5 |
| 13 | 2 | 6 | 11 | 1 | 4 | 7 | 3 | 4 | 4 |
| 7 | 15 | 10 | 14 | 4 | 13 | 5 | 9 | 9 | 17 |
| - 7 | - 9 | - 3 | - 5 | - 1 | - 7 | - 4 | - 1 | - 3 | - 4 |
| 0 | 6 | 7 | 9 | 3 | 6 | 1 | 8 | 6 | 13 |
| 4 | 12 | 9 | 13 | 14 | 6 | 15 | 18 | 8 | 14 |
| - 3 | - 3 | - 6 | - 6 | - 4 | - 6 | - 3 | - 7 | - 3 | - 6 |
| 1 | 9 | 3 | 7 | 10 | 0 | 12 | 11 | 5 | 8 |
| 11 | 7 | 12 | 7 | 13 | 19 | 7 | 9 | 11 | 6 |
| - 4 | - 6 | - 6 | - 3 | - 3 | - 4 | - 4 | - 8 | - 8 | - 5 |
| 7 | 1 | 6 | 4 | 10 | 15 | 3 | 1 | 3 | 1 |
| 17 | 13 | 16 | 11 | 7 | 15 | 11 | 3 | 14 | 7 |
| - 9 | - 5 | - 5 | - 6 | - 4 | - 5 | - 6 | - 2 | - 9 | - 5 |
| 8 | 8 | 11 | 5 | 3 | 10 | 5 | 1 | 5 | 2 |
| 8 | 6 | 19 | 5 | 8 | 8 | 6 | 16 | 10 | 11 |
| - 5 | - 2 | - 3 | - 5 | - 0 | - 6 | - 2 | - 9 | - 5 | - 3 |
| 3 | 4 | 16 | 0 | 8 | 2 | 4 | 7 | 5 | 8 |
| 4 | 16 | 10 | 7 | 19 | 7 | 4 | 13 | 17 | 7 |
| - 0 | - 6 | - 3 | - 1 | - 9 | - 5 | - 2 | - 7 | - 6 | - 5 |
| 4 | 10 | 7 | 6 | 10 | 2 | 2 | 6 | 11 | 2 |

Page 7

| | | | | |
|---------------|---------------|---------------|-------------|---------------|
| 132 + 11 = 12 | 4 + 4 = 1 | 56 + 8 = 7 | 21 + 7 = 3 | 77 + 11 = 7 |
| 22 + 11 = 2 | 70 + 7 = 10 | 6 + 2 = 3 | 20 + 5 = 4 | 54 + 6 = 9 |
| 40 + 4 = 10 | 48 + 12 = 4 | 72 + 8 = 9 | 10 + 10 = 1 | 55 + 11 = 5 |
| 33 + 3 = 11 | 99 + 9 = 11 | 30 + 3 = 10 | 12 + 12 = 1 | 96 + 12 = 8 |
| 4 + 2 = 2 | 14 + 2 = 7 | 96 + 8 = 12 | 63 + 7 = 9 | 60 + 12 = 5 |
| 20 + 10 = 2 | 16 + 2 = 8 | 100 + 10 = 10 | 66 + 6 = 11 | 63 + 9 = 7 |
| 50 + 5 = 10 | 88 + 8 = 11 | 28 + 4 = 7 | 35 + 5 = 7 | 4 + 1 = 4 |
| 40 + 8 = 5 | 60 + 5 = 12 | 48 + 6 = 8 | 22 + 2 = 11 | 9 + 9 = 1 |
| 10 + 1 = 10 | 48 + 8 = 6 | 8 + 8 = 1 | 9 + 3 = 3 | 110 + 10 = 11 |
| 24 + 12 = 2 | 49 + 7 = 7 | 121 + 11 = 11 | 24 + 3 = 8 | 60 + 6 = 10 |
| 90 + 9 = 10 | 50 + 10 = 5 | 18 + 9 = 2 | 30 + 6 = 5 | 15 + 5 = 3 |
| 12 + 1 = 12 | 5 + 5 = 1 | 45 + 5 = 9 | 56 + 7 = 8 | 18 + 3 = 6 |
| 30 + 10 = 3 | 120 + 12 = 10 | 40 + 10 = 4 | 30 + 5 = 6 | 108 + 12 = 9 |
| 36 + 4 = 9 | 24 + 6 = 4 | 11 + 11 = 1 | 18 + 6 = 3 | 6 + 6 = 1 |
| 77 + 7 = 11 | 108 + 9 = 12 | 36 + 6 = 6 | 9 + 1 = 9 | 20 + 2 = 10 |
| 99 + 11 = 9 | 60 + 10 = 6 | 80 + 10 = 8 | 6 + 1 = 6 | 8 + 2 = 4 |
| 10 + 2 = 5 | 21 + 3 = 7 | 144 + 12 = 12 | 18 + 2 = 9 | 44 + 4 = 11 |
| 24 + 8 = 3 | 15 + 3 = 5 | 42 + 7 = 6 | 27 + 3 = 9 | 84 + 12 = 7 |
| 120 + 10 = 12 | 28 + 7 = 4 | 36 + 3 = 12 | 24 + 2 = 12 | 5 + 1 = 5 |
| 3 + 3 = 1 | 72 + 12 = 6 | 1 + 1 = 1 | 40 + 5 = 8 | 81 + 9 = 9 |

| <u>Basic Operations</u> | Page 8 |
|------------------------------------|--------|
| Addition | |
| 1) $495 + 94 = \mathbf{589}$ | |
| 2) $2374 + 5872 = \mathbf{8246}$ | |
| Subtraction | |
| 3) $7252 - 379 = \mathbf{6873}$ | |
| 4) $2432 - 486 = \mathbf{1946}$ | |
| Multiplication | |
| 5) $95 \times 62 = \mathbf{5890}$ | |
| 6) $42 \times 26 = \mathbf{1092}$ | |
| Division | |
| 7) $5985 \div 5 = \mathbf{1197}$ | |
| 8) $8578 \div 2 = \mathbf{4289}$ | |
| Addition | |
| 9) $2947 + 1800 = \mathbf{4747}$ | |
| 10) $7462 + 945 = \mathbf{8407}$ | |
| Subtraction | |
| 11) $9264 - 173 = \mathbf{9091}$ | |
| 12) $2582 - 2191 = \mathbf{391}$ | |
| Multiplication | |
| 13) $47 \times 83 = \mathbf{3901}$ | |
| 14) $91 \times 81 = \mathbf{7371}$ | |
| Division | |
| 15) $9995 \div 5 = \mathbf{1999}$ | |
| 16) $2597 \div 7 = \mathbf{371}$ | |

| <u>Inverse Operations</u> | Page 9 |
|------------------------------------|--------|
| Addition | |
| 1) $3487 + \mathbf{326} = 3813$ | |
| 2) $\mathbf{9867} + 429 = 10296$ | |
| Subtraction | |
| 3) $\mathbf{4596} - 236 = 4360$ | |
| 4) $6253 - \mathbf{843} = 5410$ | |
| Multiplication | |
| 5) $36 \times \mathbf{6} = 216$ | |
| 6) $\mathbf{9} \times 54 = 486$ | |
| Division | |
| 7) $\mathbf{835} \div 5 = 167$ | |
| 8) $96 \div \mathbf{3} = 32$ | |
| Addition | |
| 9) $7532 + \mathbf{8291} = 15823$ | |
| 10) $\mathbf{9542} + 8521 = 18063$ | |
| Subtraction | |
| 11) $\mathbf{9747} - 295 = 9452$ | |
| 12) $2524 - \mathbf{658} = 1866$ | |
| Multiplication | |
| 13) $7 \times \mathbf{46} = 322$ | |
| 14) $\mathbf{94} \times 9 = 846$ | |
| Division | |
| 15) $\mathbf{615} \div 5 = 123$ | |
| 16) $60 \div \mathbf{12} = 5$ | |

| <u>Number Work</u> | | Page 10 | | | |
|--------------------|--------------|-------------------|--------------|-------------------|---------------------|
| <u>Square</u> | <u>Cubed</u> | <u>Triangular</u> | <u>Prime</u> | <u>Factors 12</u> | <u>Multiples 25</u> |
| 1 | 1 | 1 | 2 | 1 | 25 |
| 4 | 8 | 3 | 3 | 12 | 50 |
| 9 | 27 | 6 | 5 | 2 | 75 |
| 16 | 64 | 10 | 7 | 6 | 100 |
| 25 | 125 | 15 | 11 | 3 | 125 |
| 36 | | | 13 | 4 | |
| 49 | | | 17 | | |
| 64 | | | 19 | | |
| 81 | | | 23 | | |
| 100 | | | 29 | | |
| 121 | | | | | |
| 144 | | | | | |

Page 11

| Fractions | Decimals | Percentages (%) |
|--|----------|-----------------|
| $\frac{1}{2}$ | 0.5 | 50% |
| $\frac{2}{2} = 1$ | 1 | 100% |
| $\frac{1}{4}$ | 0.25 | 25% |
| $\frac{2}{4} = \frac{1}{2}$ | 0.5 | 50% |
| $\frac{3}{4}$ | 0.75 | 75% |
| $\frac{4}{4} = 1$ | 1 | 100% |
| $\frac{1}{10}$ | 0.1 | 10% |
| $\frac{2}{10} = \frac{1}{5}$ | 0.2 | 20% |
| $\frac{3}{10}$ | 0.3 | 30% |
| $\frac{4}{10} = \frac{2}{5}$ | 0.4 | 40% |
| $\frac{5}{10} = \frac{2}{4} = \frac{1}{2}$ | 0.5 | 50% |
| $\frac{6}{10} = \frac{3}{5}$ | 0.6 | 60% |
| $\frac{7}{10}$ | 0.7 | 70% |
| $\frac{8}{10} = \frac{4}{5}$ | 0.8 | 80% |
| $\frac{9}{10}$ | 0.9 | 90% |
| $\frac{10}{10} = 1$ | 1 | 100% |
| $\frac{1}{3}$ | 0.33... | 33.33...% |
| $\frac{2}{3}$ | 0.66... | 66.66...% |
| $\frac{3}{3} = 1$ | 1 | 100% |

Page 12

Convert Decimal to Percent

$0.58 = 58 \%$

$0.16 = 16 \%$

$0.53 = 53 \%$

$0.05 = 5 \%$

$0.11 = 11 \%$

$0.81 = 81 \%$

Convert Percent to Decimal

$87 \% = 0.87$

$55 \% = 0.55$

$50 \% = 0.5$

$86 \% = 0.86$

$21 \% = 0.21$

$34 \% = 0.34$

Convert Decimal to Fraction

$0.73 = \frac{73}{100}$

$0.3 = \frac{3}{10}$

$0.8 = \frac{8}{10} = \frac{4}{5}$

$0.41 = \frac{41}{100}$

$0.12 = \frac{12}{100} = \frac{3}{25}$

$0.55 = \frac{55}{100} = \frac{11}{20}$

Convert Fraction to Decimal

$\frac{5}{20} = 0.25$

$\frac{6}{10} = 0.6$

$\frac{9}{25} = 0.36$

$\frac{17}{20} = 0.85$

$\frac{9}{20} = 0.45$

$\frac{4}{10} = 0.4$

Convert Fraction to Percent

$\frac{9}{10} = 90 \%$

$\frac{3}{25} = 12 \%$

$\frac{15}{20} = 75 \%$

$\frac{8}{10} = 80 \%$

$\frac{6}{20} = 30 \%$

$\frac{5}{25} = 20 \%$

Convert Percent to Fraction

$20 \% = \frac{20}{100} = \frac{1}{5}$

$72 \% = \frac{72}{100} = \frac{18}{25}$

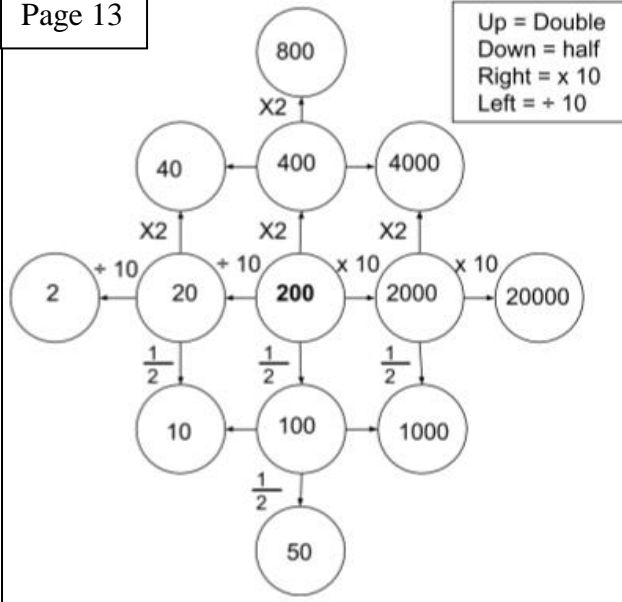
$73 \% = \frac{73}{100}$

$65 \% = \frac{65}{100} = \frac{13}{20}$

$56 \% = \frac{56}{100} = \frac{14}{25}$

$76 \% = \frac{76}{100} = \frac{19}{25}$

Page 13



Page 14

Conversions

1600g
1400ml
1800m
1300mm
190cm
17mm

Page 14

3D Shapes Table

| Shape | Faces | Edges | Vertices |
|---------------------------------|-------|-------|----------|
| Cube | 6 | 12 | 8 |
| Cuboid | 6 | 12 | 8 |
| Triangular Prism | 5 | 9 | 6 |
| Cylinder | 3 | 2 | 0 |
| Square based Pyramid | 5 | 8 | 5 |
| Triangular based pyramid | 4 | 6 | 4 |
| Sphere | 1 | 0 | 0 |
| Cone | 2 | 1 | 1 |

Maths Facts

Page 14

- Height x base then half
- 360°
- 180°
- 180°
- 4 sided shape
- 360°
- Out of 100
- \div bottom, x top
- Length x Width x Height

X, \div by 10, 100, 1000

Page 15

- 1) 4350
- 2) 0.0395
- 3) 55
- 4) 4.2
- 5) 370
- 6) 1.8
- 7) 2700
- 8) 3.15
- 9) 1600
- 10) 0.105
- 11) 40500
- 12) 0.39

Mean/ Range

Page 17-18

1. a) 49 b) 90
2. a) 15 b) 24
3. a) £49 b) £83
4. a) 32 b) 21

Page 20

Area of Squares and Rectangles

1. 16cm^2 21cm^2
2. 81cm^2 88cm^2
3. 36cm^2 216cm^2
4. 121cm^2 480cm^2

Page 21

Area of Compound Shapes

- 1) 34cm^2
- 2) 80cm^2
- 3) 161cm^2

Page 23

Triangle Properties**Part 1**

- 1) Scalene
- 2) Right angled
- 3) Right angled
- 4) Right angled
- 5) Isosceles
- 6) Isosceles
- 7) Isosceles
- 8) Equilateral
- 9) Scalene
- 10) Right angled
- 11) Equilateral
- 12) Scalene

Page 24

Triangle Properties**Part 2**

- 1) Scalene
- 2) Isosceles
- 3) Isosceles
- 4) Equilateral
- 5) Isosceles
- 6) Scalene
- 7) Right angled
- 8) Scalene
- 9) Isosceles
- 10) Right angled
- 11) Right angled
- 12) Equilateral

Page 31

Grammar Page 1

Noun = house
 Adjective = happy
 Verb = smile
 Adverb = swiftly

Past/ Present Tense

took
 knew
 brought
 wrote

Singular/ Plural

boxes
 calves
 feet
 geese

Homophones

know
 there
 weather
 steel

Apostrophes

baby's
 children's
 month's
 postmen's

Page 32

Grammar Page 2

Noun = brush
 Adjective = floppy
 Verb = wander
 Adverb = quickly

Past/ Present Tense

stand
 meet
 lose
 build

Singular/ Plural

churches
 children
 edges
 elves

Homophones

read
 where
 made
 their/ veil

Apostrophes

Martin's
 students'
 Mike's
 salesmen's

Page 33

Grammar Page 3

Noun = bath
 Adjective = warm
 Verb = ran
 Adverb = slowly

Past/ Present Tense

bit
 built
 ate
 froze

Singular/ Plural

memos
 knives
 mice
 heroes

Homophones

their/ tails
 are/ pale
 hole
 leek

Apostrophes

you've
 It's
 he's
 don't

Synonyms

Page 34

- 1) a) happening slowly
 b) interruption
 c) immediate
 d) alone
 e) followed
 f) really

Synonyms (Example Answers)

Page 34

- 2) a) freedom
 b) tasty
 c) interested
 d) dim
 e) shake
 f) jump
 g) hit
 h) ravenous
 i) strange
 j) taunt

Synonyms

Page 34

- 3) round = circular
 right = correct
 brave = courageous
 gloomy = mournful
 speedy = rapid
 hard = difficult

Page 34

Synonyms for anger (Examples)

- 4) crossness, annoyance, fury, rage, hatred, temper, displeasure, wrath

Page 35

Plurals

cats
 foxes
 turkeys
 ponies
 calves
 cuffs
 kangaroos
 fish
 mice

Page 35

Opposites

below
 dull
 idle
 expensive
 shallow
 alive

Page 35

Compound Words

baseball
 somewhere
 cannot
 lifetime
 become

Page 35

Prefixes

misbehave
 illegal
 unhappy
 incorrect
 irrational

Page 35

Spelling

apparent
 environment
 government
 independent
 persistent

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