"Success is not final, failure is not fatal: it is the courage to continue that counts." – Winston Churchill

Year 8 W&AW 2 Revision Topics

Revising for a maths exam is not about simply reading through notes. To improve and make progress with maths you need to 'do maths' – do lots of questions on topics that you need to become more confident with.

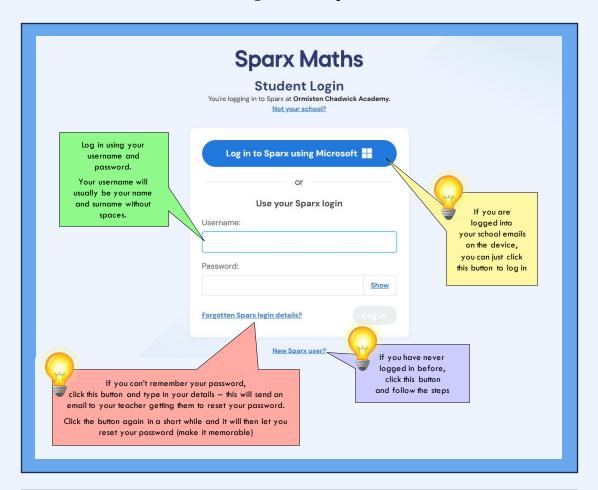
Use these codes in the Sparx Maths Independent Practice section of the website to enable you to effectively revise for your assessment and showcase your true mathematical ability.

Topic	Sparx Maths Independent Practice Codes
Rounding	M111, M131, M431, M994
4 Operations	M429, M152, M187,M928, M347, M803, M262, M354, M491
Directed Number Operations	M106, M288
Standard Form	M678, M719
Substitution	M208, M327, M417, M979
Collecting Like Terms	M531, M795, M949
Simplifying with Indices	M150, M608
Expanding	M237, M792, M960
Solving Equations	M387, M634, M647, M707
Perimeter	M635, M690
Area	M269, M291, M303, M390, M610, M705, M996
Area & Circumference of a Circle	M595, M169, M231
Volume	M765, M722
Prime Factorisation	M108, M365
Fractions Operations	M110, M835, M931
Fractions, Decimals and Percentages	M264, M958
Percentage Increase/Decrease	M476, M533

NOTE: These are all the topics we have covered this year, some aspects of each of the topics will be assessed in the assessment

"Success isn't overnight. It's when every day you get a little better than the day before. It all adds up." – Dwayne Johnson

How to Log Into Sparx Maths

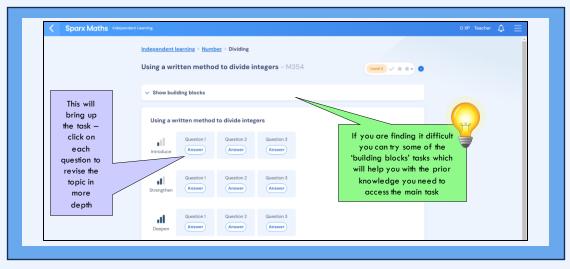




How to do Sparx Maths independent Practice

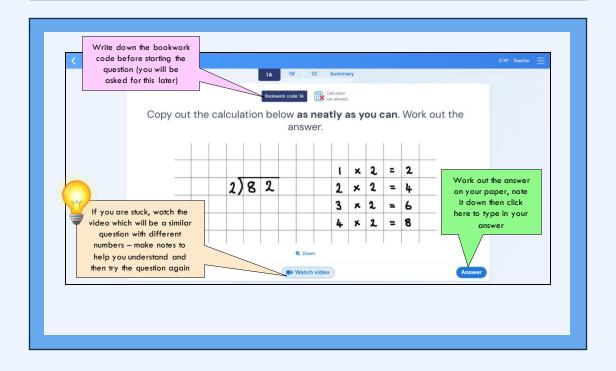






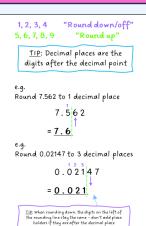
How to complete a Sparx Maths task

BEFORE beginning the task you need to have paper to do your working out and to write down the bookwork codes. Sparx Maths Independent learning | Number | Dividing Using a written method to divide integers - M354 Level 2 ✓ ★ ★ ▼ ① Show building blocks This will bring up Using a written method to divide integers the task – click on If you are finding it difficult you can try some of the each 'building blocks' tasks which question to will help you with the prior revise the topic in knowledge you need to access the main task more depth



"Mistakes are the stepping stones to wisdom." - Oprah Winfrey

Key Examples for Year 8 WDAW 2



```
1, 2, 3, 4

5, 6, 7, 8, 9

"Round up"

TIP: Significant figures start from the first non-zero digit in the number

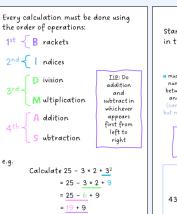
e.g.

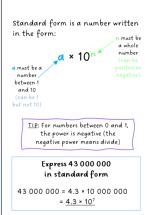
Round 0.0021527 to 3 significant figures

0.0021527

= 0.00215

TIP: When rounding down, the digits on the left of the rounding line stay the same
```





To add/subtract numbers in standard form:

STEP 1: Convert to ordinary numbers

STEP 2: Use the column method

STEP 3: Convert back to standard form

e.g. $(3 \times 10^8) + (2 \times 10^6)$ 300000000 + 2000000 302000000

 $= 3.02 \times 10^8$

TIP: When collecting like terms, remember that a² is not the same as a, so you can't add these together.

= 28

 $3a^2 + 7a + 4a^2 - 3a$

 $= 7a^2 + 4a$

<u>TIP</u>: Don't change the indices when adding, so $a^2 + a^2 = 2a^2$

TIP: Use the grid method to expand the brackets

e.g.

Expand 5(3x + 4)

= 15x + 20

```
TIP: To solve an equation we need to find the value of the letter e.g.

Solve 8a - 5 = 11

TIP: To keep the equation balanced, do 8a = 16
```

e.g.

Solve +10 + 6y = 32

IIP If there isn't a sign in front of the number letter, it is a *

e.g. Solve 4a + 3 = 2a + 15 -2a 2a + 3 = 15 -3 2a = 12 $\div 2$ a = 6

TIP: Get rid of the

smallest letter first

Perimeter means the distance around the shape. Remember to add ALL the sides.

Look at the incinantal lines: 11 - 9 = 0

Nem Look at the artical sides at the artical lines: 0 - 9 = 17

Herm

Perimeter = 11 - 9 - 8 - 5 - 6 - 17

- 56cm

Area means the space inside the shape

TIP: Split the shape up into shapes you know how to work out the area for.

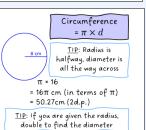
5cm
1 5 × 8 = 40cm²
2 11 × 9 = 99cm²
2 11 × 9 = 99cm²
3 Total Area:
 = 40 + 99
 = 139cm²

Area = $\pi \times r^2$ Som

TIP: Radius is halfway, diameter is all the way across $\pi \times 8^2$ = 64 π cm² (in terms of π)
= 201.06cm² (2d.p.)

TIP: If you are given the diameter, remember to halve to find the radius

TIP: If the number doesn't divide evenly, write as a fraction



To find the volume of a prism:
Cross sectional area × length

IIP: The cross section is the
front face that goes all the
way through the shape

way through the shape

question, yo

get it wro

get it wro

for triangles

quess, you

The most important thing to remember is not to give up – if you write nothing for a question, you will definitely get it wrong, so have a guess, you will get marks for working out.