

10 things a student should do when completing Maths homework.

Student checklist for good Maths homework

I always write the Date, Title, topic number and Key Words for all my tasks.

I always watch the video before attempting the questions.

I always take Full Notes of all the examples modelled in the video and shown by my teacher.

I copy every question that I attempt in my book. *(From the video and the Quiz).*

I show all my working out for every question in the quiz that I do.

I try to model my work the way I was shown in the video by Mr Hegarty.

I use a pencil and ruler for all diagrams.

I mark my work correct/incorrect as I go in **green Pen**.

I write down correct answers when **Sparx Maths** tells me the correct answer.

I write down my score at the end of quiz .

Example of work

9/12/19

Fractions as pictures

Key words: Model, whole, total, part, bar model, numerator, denominator.

Example 1

1) 2) 3) 4) 5) 6) 7) 8) 9) 10) 11) 12) 13) 14) 15) 16) 17) 18)

Example 2

1) 2) 3) 4)

Example 3

What fraction is represented by each picture?

i) ii)

Example 4

Colin says that the following picture represents $\frac{2}{3}$. Since one part out of two is shaded, is Colin correct?

NO Because $\frac{2}{3}$ is one part out of 2 equal parts

video: 58

Example 5: Bar Models

$\frac{3}{4}$

$\frac{4}{7}$

$\frac{3}{4}$

Quiz:

- What fraction is shaded? $\frac{1}{4}$ not
- What fraction is shaded? $\frac{2}{7}$
- What fraction is shaded? $\frac{3}{8}$
- What fraction is not shaded? $\frac{2}{10}$
- What fraction is not shaded? $\frac{2}{10}$
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- What fraction is not shaded? $\frac{2}{10}$
- What fraction is shaded? $\frac{2}{10}$

14/10/19

Index form (Index) - 102

Index notation

$2 \times 2 \times 2 \times 2 \times 2 = 2^5$

Index / power / exponent

base number

"2 to the power of 5"

7th "squared"

7th "cubed"

4, 56 etc = to the power of 4

| Index form | meaning | Answer |
|------------|---------------------------------|-----------------------|
| 2^3 | $2 \times 2 \times 2$ | 8 |
| 2^2 | 2×2 | 4 |
| 2^1 | 2 | 2 |
| 2^0 | 1 | 1 |
| 2^{-1} | $\frac{1}{2}$ | $\frac{1}{2} = 0.5$ |
| 2^{-2} | $\frac{1}{2 \times 2}$ | $\frac{1}{4} = 0.25$ |
| 2^{-3} | $\frac{1}{2 \times 2 \times 2}$ | $\frac{1}{8} = 0.125$ |

Example Questions

$3^3 = 3 \times 3 \times 3 = 27$

$3^2 = 3 \times 3 = 9$

$3^1 = 3 = 3$

$3^0 = 1 = 1$

$3^{-1} = \frac{1}{3} = \frac{1}{3}$

$3^{-2} = \frac{1}{3 \times 3} = \frac{1}{9}$

$3^{-3} = \frac{1}{3 \times 3 \times 3} = \frac{1}{27}$

Example Questions - 3

$5^3 = 5 \times 5 \times 5 = 125$

$5^2 = 5 \times 5 = 25$

$5^1 = 5 = 5$

$5^{-1} = \frac{1}{5} = \frac{1}{5}$

$5^{-2} = \frac{1}{5 \times 5} = \frac{1}{25}$

$5^{-3} = \frac{1}{5 \times 5 \times 5} = \frac{1}{125}$

Dividing by 5

Multiplying by 3

Multiplying by 5

Multiplying by 4

Example 2 Questions

$4^3 = 4 \times 4 \times 4 = 64$

$4^2 = 4 \times 4 = 16$

$4^1 = 4 = 4$

$4^0 = 1 = 1$

$4^{-1} = \frac{1}{4} = \frac{1}{4}$

$4^{-2} = \frac{1}{4 \times 4} = \frac{1}{16}$

$4^{-3} = \frac{1}{4 \times 4 \times 4} = \frac{1}{64}$

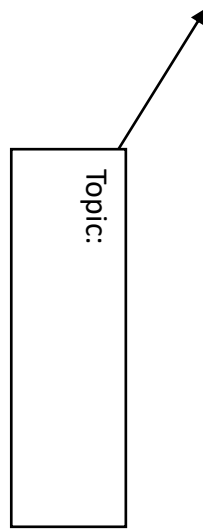
SUBJECT

DATE

MIND MAP

* Create a mind map of the information you have learnt.

Subtitle:



| | | |
|---------|------|-----------|
| SUBJECT | DATE | KEY WORDS |
|---------|------|-----------|

- * Write down 5 key words you have learnt and the definitions.
- * Using these key words, write 5 sentences related to your learning.

| | Key words | Definitions |
|---|-----------|-------------|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

| | |
|----|--|
| 1. | |
| 2. | |
| 3. | |
| 4. | |
| 5. | |

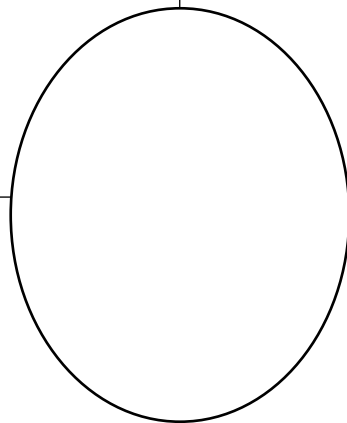
SUBJECT

DATE

GRID 4

✧✧ Write the subject/ topic you will be focusing on in the centre circle

✧✧ In each box write about a different part of your learning e.g. key words, diagrams



| | | |
|---------|------|------------|
| SUBJECT | DATE | BRAIN DUMP |
|---------|------|------------|

- * 30 seconds – write down things you remember easily
- * 1 minute – stretch your brain for one minute and think hard to remember more
- * Look at your knowledge organiser, is there anything you could add to your notes?

30 SECONDS

1 MINUTE

CHECK AND ADD

EBI – what do you need to work on/ focus on to improve your learning?

| SUBJECT | DATE | Questions |
|---|------|-----------|
| <ul style="list-style-type: none"><li data-bbox="44 147 1386 196">*[*] In the top box write one revision question for each of the key words on the KO<li data-bbox="44 196 1386 246">*[*] In the bottom left box write five quick 2-mark questions on each topic on the KO<li data-bbox="44 246 1386 285">*[*] In the bottom right box write three long answer questions on what you have learnt | | |

| | | |
|---------|------|----------------|
| SUBJECT | DATE | Cornell system |
|---------|------|----------------|

- * Write your notes in the main body of paper, this can include diagrams.
- * In the left column write the key words or phrases from your notes.
- * In the bottom box write sentences that include all your key words and phrases.

| |
|--|
| |
| |

| SUBJECT | DATE | DIAGRAM |
|--|------|---------|
| <ul style="list-style-type: none">• 5 minutes timed: draw and label what you remember easily.• 2 minutes: stretch your brain for one minute and think hard to remember more.• Check and add: Look at your knowledge organiser, is there anything you could add to your diagram or labels? | | |