Year 10 - Maths - Autumn 1

| Unit 1 - surds |  |  |  |
| :---: | :---: | :---: | :---: |
| No. | Question | Answer | HIGHER |
| 1.1 | A surd is | An irrational root | X |
| 1.2 | $\sqrt{a} \times \sqrt{b}$ | $\sqrt{a b}$ | X |
| 1.3 | $\sqrt{\frac{a}{b}}$ | $\frac{\sqrt{a}}{\sqrt{b}}$ | X |
| 1.4 | $\sqrt{a}+\sqrt{a}$ | $2 \sqrt{a}$ | X |
| 1.5 | $\sqrt{a}-\sqrt{a}$ | 0 | X |
| 1.6 | $\sqrt{a} \times \sqrt{a}$ | $a$ | X |
| 1.7 | $(\sqrt{a}+1)(\sqrt{a}-1)$ | $a-1$ | X |
| 1.8 | $a \times a$ | $a^{2}$ ("a squared") |  |
| 1.9 | $a \times a \times a$ | $a^{3}$ ("a cubed") |  |
| 1.10 | $a \times a \times a \times a$ | $a^{4}$ ("a to the power of 4") |  |
| 1.11 | $\pm \sqrt{25}$ | The square roots of 25 are 5 and -5 |  |
| 1.12 | $\sqrt[3]{64}$ | "The cube root of 64 is 4" |  |
| 1.13 | Index | The power |  |
| 1.14 | $a^{b} \times a^{c}$ | $a^{b+c}$ |  |
| 1.15 | $\frac{a^{b}}{a^{c}}$ | $a^{b-c}$ |  |
| 1.16 | $\left(a^{b}\right)^{c}$ | $a^{b c}$ |  |
| 1.17 | $a^{0}$ | 1 |  |
| 1.18 | $a^{-b}$ | $\frac{1}{a^{b}}$ | X |
| 1.19 | $a^{\frac{b}{c}}$ | $\sqrt[c]{a^{b}}$ | X |
| 1.20 | Standard form | A way of writing numbers in the form $a \times 10^{n}$ where a must be between 1 and 10 and n is an integer |  |
| 1.21 | $10^{-2}$ | 0.01 |  |
| 1.22 | $10^{-1}$ | 0.1 |  |
| 1.23 | $10^{0}$ | 1 |  |
| 1.24 | $10^{1}$ | 10 |  |
| 1.25 | $10^{2}$ | 100 |  |
| 1.26 | $10^{3}$ | 1000 |  |
| 1.27 | 0.0004 in standard form... | $4 \times 10^{-4}$ (the number must be between 1 and 10) |  |
| 1.28 | 40000 in standard form... | $4 \times 10^{4}$ (the number must be between 1 and 10) |  |


| Unit 2 - \% increase and decrease |  |  |  |
| :---: | :--- | :--- | :--- |
| No. | Question | Answer | HIGHER |
| 2.1 | \% increase (non calculator) | Find the \% and add it on |  |
| 2.2 | \% decrease (non calculator) | Find the \% and take it away |  |
| 2.3 | \% Change (calculator) | original x \% multiplier |  |
| 2.4 | Compound Percentages | original x \% multiplier time interval |  |
| 2.5 | Convert a fraction to a decimal | Make the denominator 10 or 100 <br> OR divide the numerator by the <br> denominator |  |
| 2.6 | Convert a decimal to a \% | X 100 |  |


| Date (week <br> commencing) | Numbers to learn |
| :--- | :--- |
| $05 / 09 / 21$ | $1.8-1.17$ |
| $12 / 09 / 21$ | $1.13-1.22$ |
| $19 / 09 / 21$ | $1.8-1.22$ |
| $26 / 09 / 21$ | $1.19-2.6$ |
| $03 / 10 / 21$ | $1.1-1.4 \& 2.1-2.6$ |
| $10 / 10 / 21$ | $1.1-1.12$ |
| $17 / 10 / 21$ | $1.1-2.7$ |

## Learning means...

I am using look >> cover >> write >> check at least twice for this week's facts
and/or

I made flash cards ( "Question" on one side and "Answer" on the other) for the facts and got someone to test me on them at least twice

## so that...

I achieve the minimum score of $8 / 10$ on the quiz

