|  |  |  |
| --- | --- | --- |
| **Topic/Skill** | **Definition/Tips** | **Example**  **Topic: Growth and Decay** |
| 1. Exponential Growth | When we **multiply** a number **repeatedly** by the **same number** (, resulting in the number **increasing by the same proportion** each time.  The original amount can grow very quickly in exponential growth. | is an example of exponential growth, because the numbers are being multiplied by 2 each time. |
| 2. Exponential Decay | When we **multiply** a number **repeatedly** by the **same number** (, resulting in the number **decreasing by the same proportion** each time.  The original amount can decrease very quickly in exponential decay. | is an example of exponential decay, because the numbers are being multiplied by each time. |
| 3. Compound Interest | Interest paid on the **original amount and the accumulated interest**. | A bank pays 5% compound interest a year. Bob invests £3000. How much will he have after 7 years. |
| 4. Exponential Graph | The equation is of the form **,** where is a number called the **base**.  If the graph **increases**.  If , the graph **decreases**.  The graph has an **asymptote** which is the **x-axis**.  The **y-intercept** of the graph is **s** | Image result for exponential function definition math |

**Knowledge Organiser**