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| **Core Knowledge Map** |
| Subject: Functions | Year: 11 | Term: 1 |
| What are we learning? |
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| Unit Objective | Sparx IL Code |
| Function Notation (substituting into functions) | P116 |
| Domain and Range | P934 |
| Composite Functions | P408 |
| Inverse Functions | P442 |
| Sketching quadratics and exponentials | P241, P607 |
| Significant points on a graph | P557 |

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| How will I be assessed  |
| Topic test at the end of the unit. |
| Big questions: |
| Given that f(x) = x3 + 7 and g(x) = x – 4, Work out f(3), gf(x) and g-1(x).What is the domain and range of f(x)?A function f(x) is defined as Draw the graph of on the axes below. f(x) = − x −4 ≤ x < 0 = x2 0 ≤ x < 2 = 10 − 3x 2 ≤ x ≤ 4 |
| How does this build on previous learning? | How will this link to my future learning? |
| Substituting numbers into expressions.Changing the subject.Sketching and drawing graphs.Simplifying expressions. | This is covered in A level Maths where you will look at more complicated functions and graphs.Using notation in differentiation and factor theorem. |
| Core knowledge: | Key vocabulary: |
| * define the domain of a function.
* work out the range of a function.
* express a domain in a variety of forms, for example *x* > 2, for all *x* except *x* = 0, for all real values.
* express a range in a variety of forms, for example f(*x*) ≤ 0, for all f(*x*) except f(*x*) = 1.
* understand, interpret, and use composite function fg(x).
* understand, interpret and use inverse function f -1(x.
* draw or sketch graphs of linear, quadratic, and exponential functions with up to 3 domains.
* label points of intersection of graphs with the axes.
* understand that graphs should only be drawn within the given domain.
* identify any symmetries on a quadratic graph and from this.
* Determine the coordinates of the turning point.
 | * Domain
* Range
* Composite
* Function
* Inverse
* Quadratic
* Significant point
* Graphs
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| Need more help? Use the Sparx Independent Learning codes. |