

Course Code  
Name of class

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# Chapter 1

## Style Verification

### 1.1 Box Environments

#### Definition 1.1: Sample Definition

This tests the red header box style with variable width.

#### Lemma 1.1 Consistency

All boxes should respect the chapter-based numbering.

#### Proposition 1.1 Simple Math

Testing math shortcuts:  $\mathbb{R}$ ,  $\mathbb{C}$ , and  $\epsilon$ .

#### Corollary 1.1 Visual Polish

Corollaries use the purple accent color.

#### Claim 1.1 Design

The Claim box uses a green borderline west style.

#### Example 1.1 (Working Example)

This tests the teal-framed example box.

$$\|x\|_p = \left( \sum_{i=1}^n |x_i|^p \right)^{1/p} \quad (1.1)$$

### 1.1.1 Test subsection

The art of yapping they say.

# Chapter 2

## Interaction & Logic

### 2.1 Problem Solving

#### Question 1: Logical Test

Does the Question counter reset at the start of a new chapter?

#### Solution

This is the solution environment. Note how the green header aligns with the question box above it.

#### Note:-

This is a floating note with a drop shadow. It is useful for highlighting non-critical but helpful information.

### 2.2 Algorithms & Math

#### Algorithm 1: The Cleanup Process

```
Input: Initial LaTeX code
Output: Cleaned PDF
/* Test of algorithm2e styling */  
1 if Compile is successful then
2   | Keep working;
3 end
4 else
5   | Check the log file;
6 end
```

### 2.3 Proof Styling

**Custom Proof Name:** We use the `myproof` environment to ensure the QED symbol is the custom smiley face defined in the preamble. □

# Chapter 3

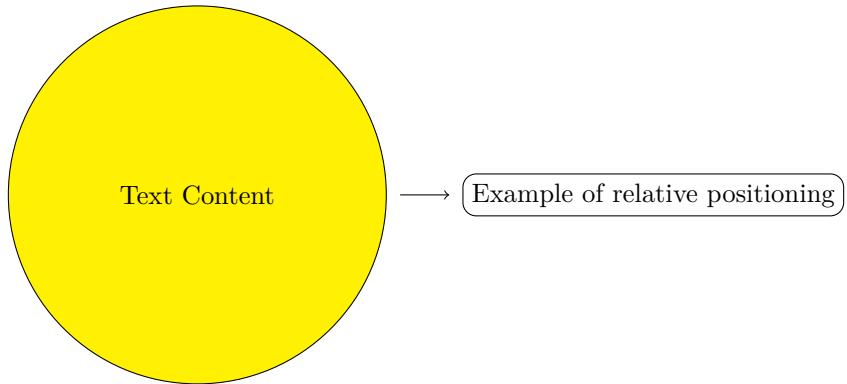
# Graphs

**Types:**

- Nodes
- Trees
- Arrays
- Arrows
- Venn Diagrams

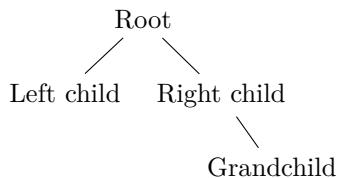
## 3.1 Nodes

**Basic Syntax:** \node[options] (name) at (0, 0) {Text Content};

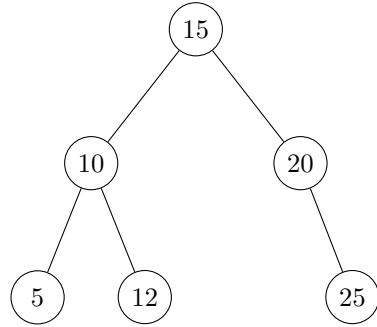


## 3.2 Trees

### 3.2.1 Normal text tree



### 3.2.2 Binary Search Trees



### 3.3 Arrays

Index	0	1	2	3	4
Value	10	22	35	40	51

Table 3.1: Array via tabular

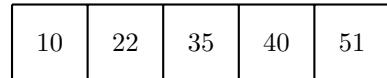


Figure 3.1: Array via tikzpicture

### 3.4 Arrows



### 3.5 Venn Diagrams

