

3.1 Measuring and Sighting

Name: _____ Class: _____ Date: _____

Total: 10 marks

KEY WORDS envelope 外包形 • plumb line 铅垂线 • comparative measurement 比较测量 • proportion 比例
• sighting 目测

Objective

Measure accurately by **sighting** 目测 with a pencil at arm's length.

You must be able to:

- measure with one comparative unit
- check angles by rotating the pencil
- use **plumb lines** 铅垂线 for alignment
- draw the **envelope** 外包形 first

1 Worked examples

Study these first. Each one shows the method for a task used later.

■ Sighting

A locked, fully extended arm turns the pencil into a ruler and protractor. Same arm, same lean, same eye every time.

■ Comparative units

Pick one unit (a head, a cup) and measure everything in it — 'the body is 7.5 heads' is a comparative measurement.

■ Envelope first

Draw the big simple shape that contains the whole subject, then divide it.

2 Practice

2.1 When sighting, your measuring arm must be

[1]

- **A** bent comfortably
- **B** fully extended, elbow locked
- **C** resting on the easel
- **D** behind your back

2.2 What is a plumb line and what does it check? [2]

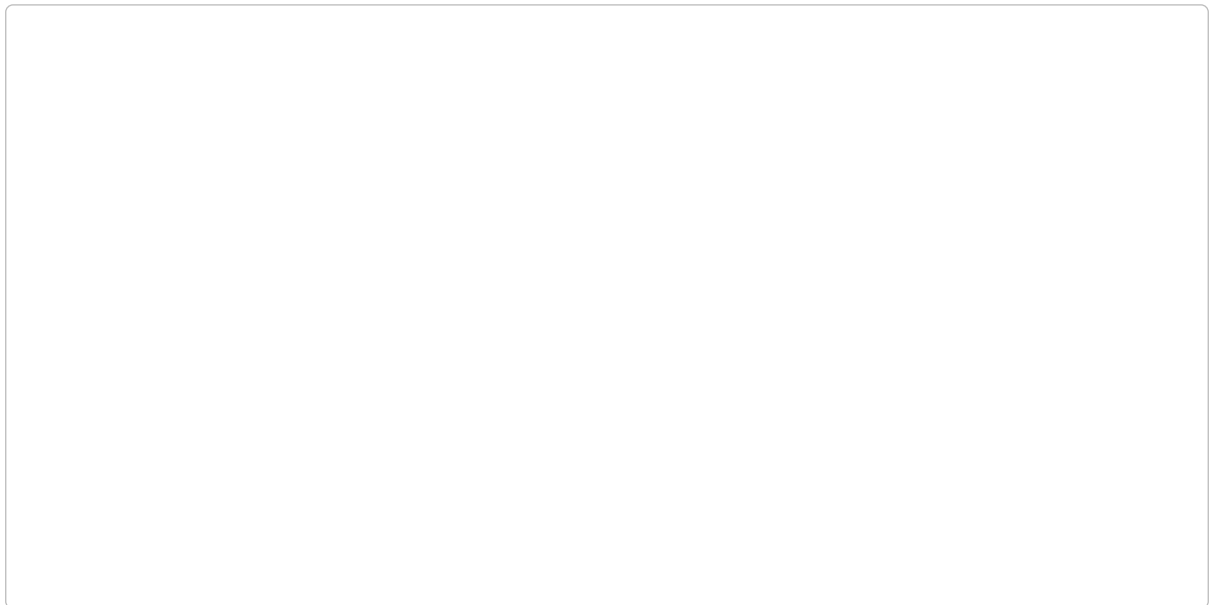
2.3 Why draw the envelope before the details? [1]

3 Studio & portfolio tasks

3.1 Make a **measured observational drawing** of a still life.

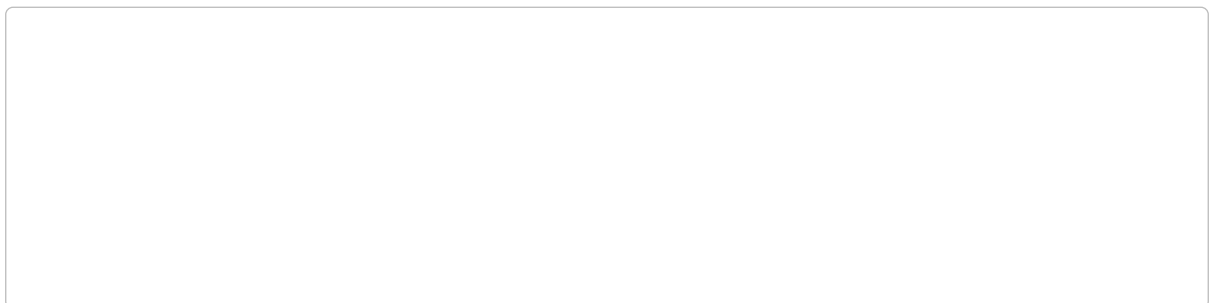
(a) Block the envelope, then use a comparative unit to place the parts. [3]

(b) Use at least two plumb lines to check alignments. [1]



3.2

() Draw one object, then check three measurements by sighting and correct any errors.[2]



Solutions

2.1 B. a locked, extended arm keeps the unit constant.

2.2 an imagined vertical; it checks which landmarks line up directly above/below each other.

2.3 it fixes the overall size and proportion so details sit correctly.

3.1 an accurate envelope; parts measured in one unit; plumb checks used; proportions read correctly.

3.2 three sighted checks shown; at least one correction made.