Homework 1: Investigation

# 1. Primary and secondary research are both necessary for the modern designer.

(a) Give **one** example of primary research. [1]

(b) Give **one** example of Secondary research. [1]

# 2. Evaluate the advantages and disadvantages of each of the computer mice below with regards to ergonomics, anthropometrics, manufacturing cost and durability:



**Mouse A Mouse B**

|  |  |
| --- | --- |
| **Advantages of Mouse A** | **Advantages of Mouse B** |
|  |  |
| **Disadvantages of Mouse A** | **Disadvantages of Mouse B** |
|  |  |

[4]

# 3. A skateboard helmet is shown below.



# Suggest two ergonomic considerations that will have been factored in at the design stage. [2]

1. Anthropometric data was used in the design of the helmet.
2. State what is meant by anthropometrics. [1]

# Suggest two anthropometric considerations that would have been relevant in the design of the helmet and give a reason why each would be necessary. [4]

|  |  |  |
| --- | --- | --- |
|  | **Anthropometric consideration** | **Reason** |
| **1** |  |  |
| **2** |  |  |

# 

# You have been asked to consider how the helmet design could be amended to fit people of varying head sizes.

# Briefly explain one suitable amendment to the design. [2]

1. Explain how a design specification is used both before and after prototyping. [3]

4. Give **two** reasons why it is important for designers to source more ecological   
ways to manufacture products. [2]

Total 20 marks