

**MARK SCHEME for the May/June 2010 question paper  
for the guidance of teachers**

**0445 DESIGN AND TECHNOLOGY**

**0445/23**

Paper 23 (Graphic Products), maximum raw mark 50

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

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**A1** Rectangular screen 50 × 4 (2)  
Ø50 circle (1)  
Triangle 45° × 90° size (1) pos(1) (2 × 1)  
Complete outline 70 × 120 (2)  
Radius to min two corners (2) [9]

[Total: 9]

**A2** Accuracy and proportion of:  
**A** (1)  
**Y** (1)  
**E** (1)  
**R** (1)  
Spacing (1)  
Height (1) [6]

[Total: 6]

**A3 (a)** Development (net)  
4 sides (1)  
Regular square 64 side (1)  
4 semi-circles min 2 drawn accurately (2 × 2) [6]

**(b)** Correct side folded box 3 (1)  
Overlap correct box 3 (1)  
Overlap correct box 4 (1)  
Tuck in shown correctly (1) [4]

[Total: 10]

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- B4 (a)** Division by construction (evident) (2)  
Verticals 93/95 spacing (1)
- (b)** 77 × 70 rectangle (2)  
Ø26 for head & body (2)  
Body correct height (41 +/-1) (1)  
Ø12 on hand (1) correct position (1) (2 × 1)  
Shoulder (1)  
Arm (two parts 1 + 1) (2)  
Arm angle 60° (1)  
MP3 pr 0–3 (3)  
Headphones (1) [15]
- (c) (i)** Suitable chart/graph type 0–2 (2)  
Data represented accurately 0–2 (2) [4]
- (ii)** Suitable chart/graph type 0–2 (2)  
Data represented correctly (1) [3]
- [Total: 25]**

- B5 (a) (i) Front View**  
Length of stand 150 (1)  
Height of stand 20 (1)  
Top of stand to Centre line 20mm (1)  
Major axis correct size 50 (1)  
Minor axis correct size 30 (1)  
Construction for ellipse (0–2pr) (2)  
Curve line quality (0–2pr) (2)  
Fuselage 30 high (1)  
Rear fuselage 15° × 45 (1)  
Tail fin R35 (1)  
R50 evident (1) [13]
- (ii) Plan**  
Width of stand 60 (1)  
Wing 30 wide at fuselage (1)  
Wing 55 from nose (1)  
Wing 55 fuselage to centre of radius ×2 (2)  
Wing tip R10 ×2 (2) [7]
- (b) Symbol**  
Symbol matching projection (1)  
Quality drawing (1) [2]
- (c) Joint at A**  
Slot (1)  
Shouldered tab (0–2 pr) (2) [3]

**[Total : 25]**