AQA

Surname _____

Other Names _____

Centre Number _____

Candidate Number _____

Candidate Signature _____

I declare this is my own work.

A-level

DESIGN AND TECHNOLOGY: FASHION AND TEXTILES

Paper 1   Technical Principles

7562/1

Time allowed: 2 hours 30 minutes

For this paper you must have:
- **normal writing and drawing instruments**
- **a scientific calculator.**

At the top of the page, write your surname and other names, your centre number, your candidate number and add your signature.

[Turn over]

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INSTRUCTIONS

- **Use black ink or black ball-point pen. Use pencil only for drawing.**

- **Answer ALL questions.**

- **You must answer the questions in the spaces provided. Do NOT write on blank pages.**

- **If you need extra space for your answer(s), use the lined pages at the end of this book. Write the question number against your answer(s).**

- **Do all rough work in this book. Cross through any work you do not want to be marked.**

INFORMATION

- **The marks for questions are shown in brackets.**

- **The maximum mark for this paper is 120.**

DO NOT TURN OVER UNTIL TOLD TO DO SO

Answer ALL questions in the spaces provided.

0	1

Complete TABLE 1 opposite by inserting the correct fibre from the list below into each fibre category.

Do NOT use any fibre more than once. [6 marks]

Ceramic

Kevlar®

Lycra®

Nylon

Polyester

Polyvinyl

PTFE

Ramie

Silk

Tactel®

TABLE 1

FIBRE CATEGORY	FIBRE
Aramid	
Cellulosic	
Chlorofibres	
Fluorofibres	
Inorganic	
Protein	

[Turn over]

0 2

State THREE properties of Gore-Tex® that make it suitable for outdoor clothing. [3 marks]

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Describe the appearance and characteristics of crêpe fabric. [3 marks]

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[Turn over]

0 3 . 2

Describe the appearance and characteristics of gingham fabric. [3 marks]

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0 3 . 3

Describe the appearance and characteristics of taffeta fabric. [3 marks]

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[Turn over]

0 4

Explain the importance of trademarks and logos to a designer. [6 marks]

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[Turn over]

0 5

FIGURE 1

LOGO FOR SPORTSWEAR

4.7 cm

55°
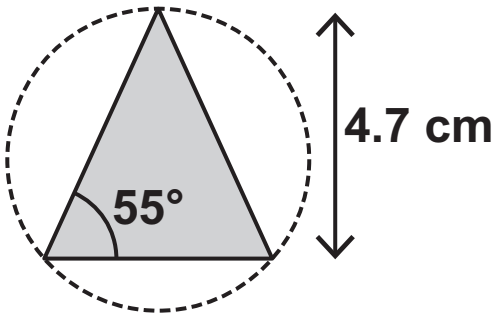
0 5 . 1

Calculate the amount of thread required to stitch around the circle in FIGURE 1.

The radius of the circle is 3.5 cm.

Give your answer to the nearest cm.

Show your working. [2 marks]

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Answer _____ cm

| 0 | 5 | . | 2 |

The shaded area of the logo in FIGURE 1 is an isosceles triangle.

Calculate the area of the triangle.

Show your working. [4 marks]

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Answer _____ cm²

6

0 6

Explain the benefits of electronic point of sales (EPOS) for fashion manufacturers and retailers. [6 marks]

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[Turn over]

0 7

FIGURE 2

FIBRE CONTENT LABEL FOR A KNITTED JUMPER

58% Wool
30% Nylon
10% Metal
2% Elastane

Explain how the fibre content in FIGURE 2 enhances the properties of the knitted jumper. [9 marks]

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0 8 . 1

TABLE 2 shows production in tonnes for five fibre producing countries.

Complete TABLE 2. [1 mark]

TABLE 2

	COTTON	NYLON	POLYESTER	VISCOSE	WOOL	MEAN
BRAZIL	6 500	8 600	9 545	12 600	975	7 644
CHINA	12 250	25 000	46 300	18 400	14 650	23 320
INDIA	14 500	15 500	9 800	16 250	850	11 380
PORTUGAL	7 000	3 575	2 345	850	3 450	3 444
USA	10 250	34 675	39 500	11 950	6 425	

0 8 . 2

Draw a suitable diagram to represent the data for the MEAN fibre production of the five countries shown in TABLE 2 in Question 08.1.

Use the graph paper opposite. [3 marks]

4
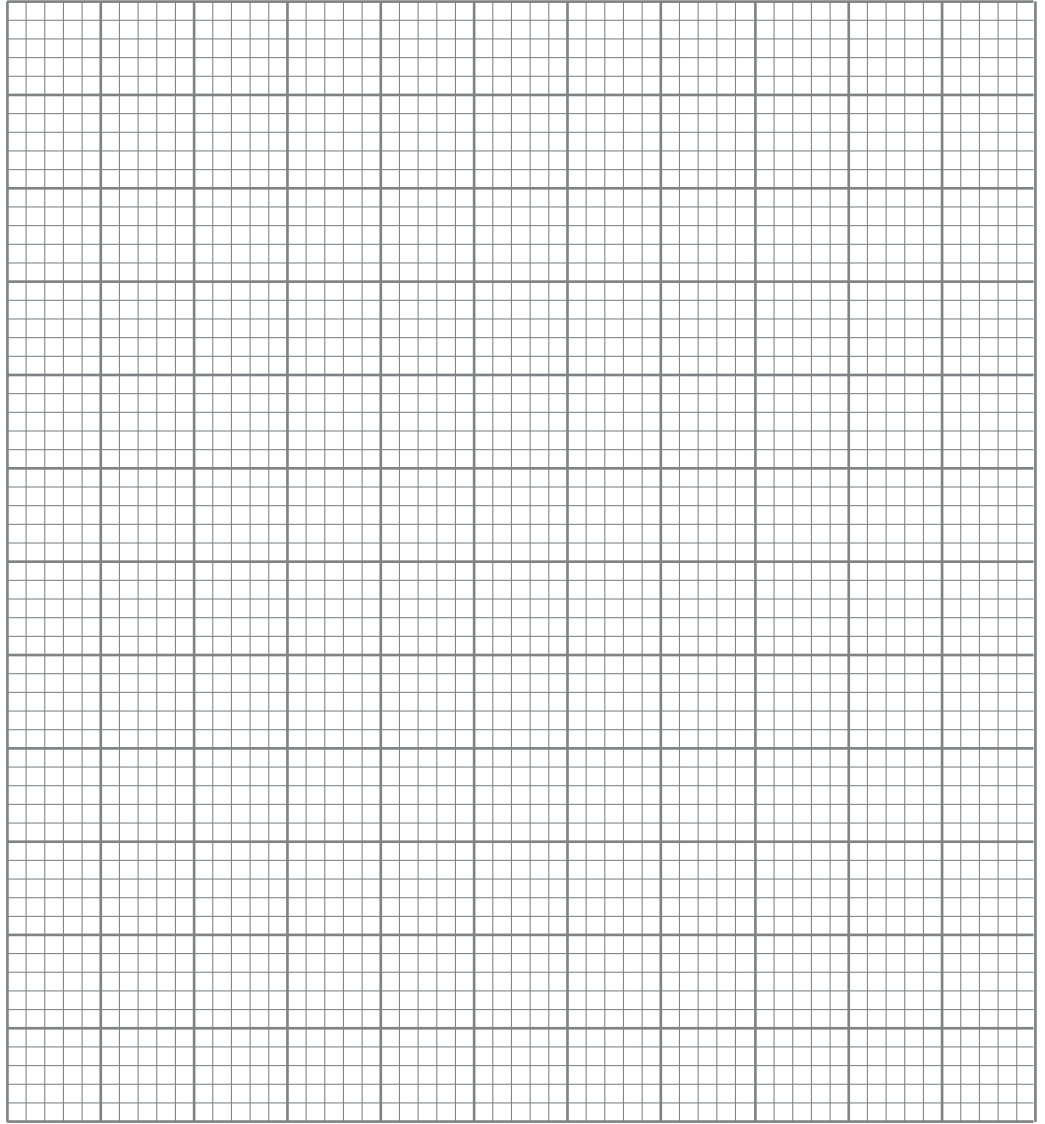
09 Explain the points a designer will need to consider when creating a specification for children's fancy dress clothing. [6 marks]

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[Turn over]

1 0

Analyse and evaluate the environmental sustainability of Lyocell® fibre.

In your answer you should refer to:

- **the source of raw material**

- **fibre manufacturing**

- **transportation.**

[12 marks]

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12

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[Turn over]

1 1

Outline the differences between batch and bespoke production of fashion products. [6 marks]

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6

[Turn over]

1 2

Outline the qualities required in work trousers for use on a construction site.

In your answer you should refer to suitable:

- **fibres**

- **fabrics**

- **finishes.**

[9 marks]

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1 3

Compare and contrast modern fabric printing methods with fabric printing by hand. [9 marks]

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1 4

A manufacturer prints 2150 metres of fabric. It takes 11 minutes to print EACH metre.

The design is changed for a second batch of 1980 metres, and EACH metre takes 9 minutes to print.

Calculate the percentage decrease in the time it takes to print the second batch.

Show your working. [4 marks]

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Answer _____ %

1 5

Give TWO reasons why piping is used on home furnishings. [2 marks]

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2 _____

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[Turn over]

1 6

State TWO reasons why a designer might use a prediction company when creating a new collection.
[2 marks]

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2 _____

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8

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[Turn over]

1 7

Analyse and evaluate the role of quick response manufacturing (QRM) in environmental and ethical issues related to fashion. [9 marks]

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1 8

A manufacturer makes 3D shapes for use in a soft play area.

One shape is the cylinder illustrated in FIGURE 3.

FIGURE 3

35 cm

78 cm
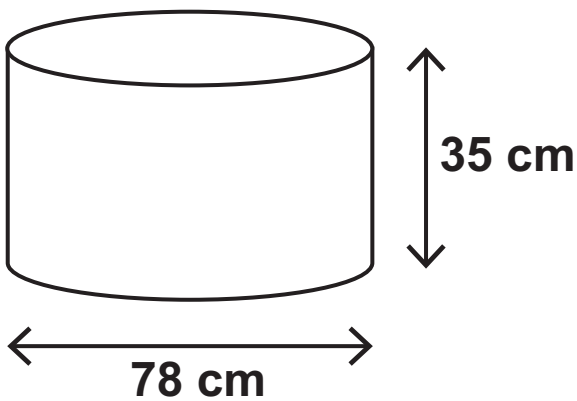
They also make a hemisphere of the SAME VOLUME as the cylinder.
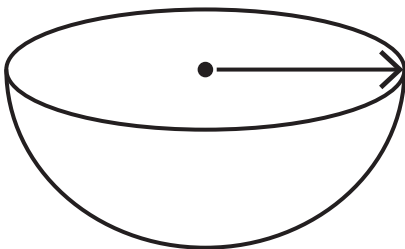
| 1 | 8 | . | 1 |

SHOW that the radius of the hemisphere is 43 cm to the nearest cm.

The volume of a hemisphere is found using $V = \dfrac{2}{3}\pi r^3$

[4 marks]

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[Turn over]

1 8 . 2

It costs 8 p to fill one hemisphere with child-safe wadding.

Work out the cost of 1 m³ of this wadding to the nearest penny.

Show your working. [2 marks]

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Answer _____ **p**

6

[Turn over]

1 9

FIGURE 4

SALES AND MARKETING CYCLES

FAD

STANDARD

CLASSIC
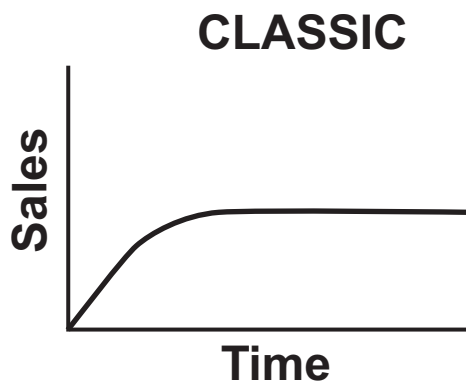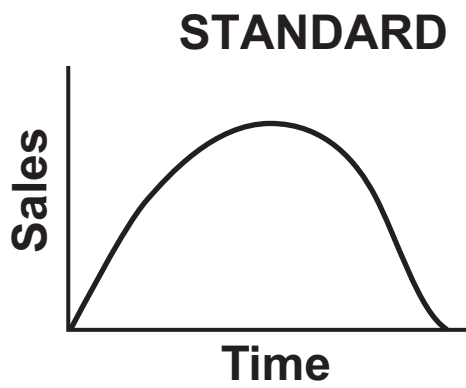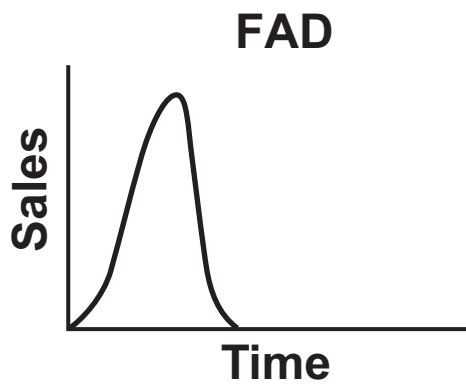
Explain the characteristics of the THREE sales and marketing cycles shown in FIGURE 4. [6 marks]

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END OF QUESTIONS

6

Additional page, if required.
Write the question numbers in the left-hand margin.

Additional page, if required.
Write the question numbers in the left-hand margin.

Additional page, if required.
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47

Additional page, if required.
Write the question numbers in the left-hand margin.

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