

Design and Technology Fashion and Textiles

Answers and commentaries
A-level (7562)

Paper 2: Designing and making principles

Marked answers from students for questions from the June 2022 exams. Supporting commentary is provided to help you understand how marks are awarded and how students can improve performance.

Contents

The below content table is interactive. You can click on the title of the question to go directly to that page.

3-mark question	3
4-mark question (Maths)	5
6-mark questions	9
9-mark question (extended writing)	17

Answers and commentaries

This resource is to be used alongside the A-level Design and Technology: Fashion and Textiles June 2022 Question Paper 2 Designing and making principles and inserts.

3-mark question

Question 5

Outline **three** ways that designers and manufacturers of children's soft toys can meet health and safety standards.

[3 marks]

Mark scheme

AO4 2b

One mark for **each** correct way.

Indicative content

- Ensure that soft toys meet the safety/BS EN 71 requirements.
- Use methods of manufacture to ensure soft toy safety.
- Use of safe materials for soft toys.
- No toxic chemicals/materials/dyes are used.
- No sharp edges.
- No plush/loose fibres on toys for children under 36 months.
- No strangulation/suffocation risk eg cords or ties.
- No components that resemble food to avoid choking hazards.
- Testing soft toys for safety before consumer use.
- Use of safety warnings and labelling for soft toys eg Lion Mark and 'Warning. Not suitable for children under 36 months'.
- Components securely attached to prevent risk of choking on small parts.
- Quality control/safety checks eg sharps left in a product.

Do not accept: use of zips, flammability warnings.

Award any other valid responses.

Student responses

Response A

1. have no small parts that are a choking hazard
2. ~~no sharp edges~~ No sharp edges
3. Safe dyes and chemicals used
4. Non-flammable material

This is a high-level response

More than three different correct ways of meeting children's soft toys health and safety standards are given in this response. In this type of question format students should not exceed the required number of answers. The first three ways gain full marks.

3 marks

Response B

1. no small detachable parts. could be a choking hazard
2. no sharp edges, could wound wound child.
3. ~~no flammable~~ little flammability

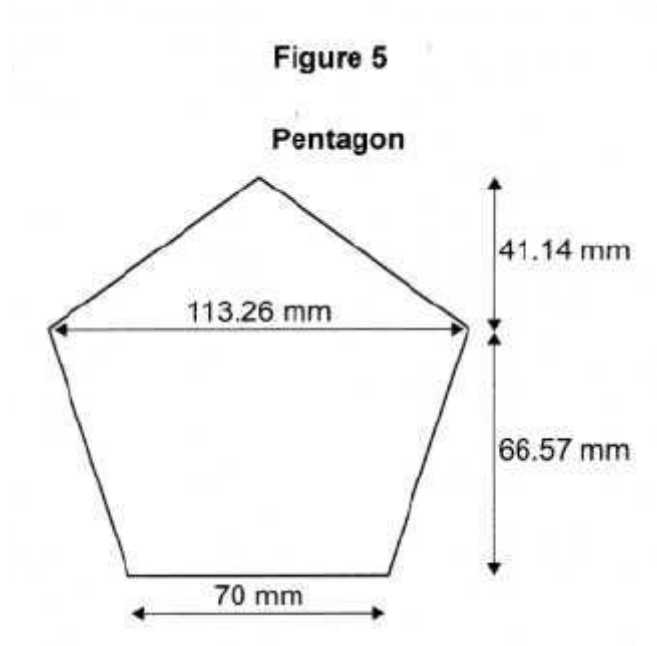
This is a mid-level response

The first two ways of meeting children's soft toys health and safety standards are correct and different from each other, and each way gains a mark. The third point is too vague to be awarded a mark. The student may be thinking of fancy dress costumes where designers and manufacturers should ensure that the fabric used either does not ignite or burns slowly but if this is the case more accuracy is needed to gain a mark.

2 marks

4-mark question

Maths question



Question 4.4

Calculate the area of the pentagon in **Figure 5**.

[4 marks]

Mark scheme

AO4 2c

Indicative content

As a general principle, a correct response is awarded full marks.

Method splitting the pentagon into a triangle and trapezium:

<p>Area of triangle:</p> $\frac{1}{2} \times 113.26 \times 41.14$ <p>or</p> <p>[2329.7582, 2329.76]</p>	<p>1 mark (M) for correct method</p>
<p>Area of trapezium:</p> <p><i>Accept correctly splitting up the trapezium into a series of small shapes.</i></p> $\frac{1}{2} (70 + 113.26) \times 66.57$ <p>or</p> $\frac{70 + 113.26}{2} \times 66.57$ <p>or</p> $70.00 \times 66.57 + 66.57 \times 21.63$ <p>or</p> <p>[6099.8091, 6099.81]</p>	<p>1 mark (M) for correct method</p>
<p>Triangle + trapezium:</p> $2329.76 + 6099.81$	<p>1 mark (M) for correct method</p>
<p>Accept [8429, 8431]</p>	<p>1 mark (A)</p>

Alternative method splitting the pentagon up into five identical triangles meeting at the middle:

$\tan 36 = \frac{35}{x}$ or $x = \frac{35}{\tan 36}$ or 48.173	1 mark (M)
$\frac{1}{2} \times 70 \times \text{their } 48.173$ or 1686.06	1 mark (M)
their 1686.06... $\times 5$	1 mark (M)
Accept [8429, 8431]	1 mark (A)

Student responses

Response A

$$\frac{b \times h}{2} = \frac{113.26 \times 41.14}{2} = 2329.7582$$

$$\frac{A+b}{2} \times h = \frac{113.26+70}{2} \times 66.57 = 6099.8091$$

$$6099.8091 + 2329.7582 = 8429.5673$$

Answer 8429.57 mm²

This is a high-level response

In maths questions, as a general principle, a correct final answer is awarded full marks with or without working, unless the requirement for working has been specified in the question to support the final answer. This response is awarded full marks. It gives full details of the correct working and the final answer falls within the range of acceptable answers.

4 marks

Response B

$$\begin{aligned}
 & \left(\frac{1}{2} \times 113.26 \right) \times 41.14 = 2329.76 \\
 & 70 \times 66.57 = 4659.9 \\
 & 113.26 - 70 = 43.26 \div 2 = 21.63 \\
 & 21.63^2 + 66.57^2 = c^2 = 4899.422 = 69.99 \\
 & c = 69.99 \\
 & \left(\frac{1}{2} \times 21.63 \right) \times 66.57 = 719.95 \\
 & 2329.76 + 4659.9 + 719.95 = 7709.61 \\
 & \text{Answer } \underline{7709.61} \text{ mm}^2
 \end{aligned}$$

This is a mid-level response

The final answer is incorrect however part of the working is correct, so some method marks are awarded. The first detailed part of the working on the first answer line is correct so gains one method mark. The student splits up the trapezium into a series of smaller shapes and gains a second method mark for 21.63×66.57 . This response is awarded 2 marks. In some maths questions there are different ways to work out the answer, so an example(s) of alternative methods are sometimes included in mark schemes.

2 marks

6-mark questions

Question 2.2

The football kits have the following fibre content:

Figure 2		Figure 3	
Jumper	100% wool	Top	71% nylon 26% polyester 3% elastane
Socks		Socks	
Shorts	100% cotton	Shorts	

Compare and contrast the performance characteristics of the fibres used in the football kits in **Figure 2** and **Figure 3**.

[6 marks]

Mark scheme

AO3 1a

AO3 1b

Marks	Description
5–6 marks	Detailed comparison and thorough contrasting of the performance characteristics of the fibres used in the football kits in Figure 2 and Figure 3 . A variety of key points are made about the performance characteristics of the fibres of each football kit. There may be some minor irrelevant points but this will not detract from the overall quality of the response. A wide range of different points from the indicative content will be included, especially at the top end of the mark band. At the lower end of the mark band there may be less information about the fibres used in one of the football kits.
3–4 marks	Good comparison and some contrasting of the performance characteristics of the fibres used in the football kits in Figure 2 and Figure 3 . Some key points are made about the performance characteristics of the fibres of each football kit. A range of different points from the indicative content will be included, especially at the top end of the mark band. At the lower end of the mark band there may be information about only one of the football kits but it will be in detail.

1–2 marks	Basic comparison and limited contrasting of the performance characteristics of the fibres used in the football kits in Figure 2 and Figure 3 . Few key points are made about the performance characteristics of the fibres of each football kit. A limited range of different points from the indicative content will be included. There may be some confusion or inaccurate information about the fibres. At the lower end of the mark band there may be basic information about only one of the football kits.
0 marks	No response or nothing worthy of credit.

Indicative content

Performance characteristics of the fibres used in the football kits	Figure 2: 100% wool top and socks, 100% cotton shorts	Figure 3: 71% nylon 26% polyester 3% elastane top and shorts.
Strength	Cotton is strong even when wet.	Nylon and polyester are strong even when wet.
Absorbency	Wool is water repellent in light rain but very absorbent in heavy rain and takes a long time to dry. Cotton very absorbent and takes a long time to dry.	Nylon, polyester and elastane do not absorb water so dry quickly. They can be engineered to enable them to wick moisture away from the body.
Elasticity	Wool is elastic and recovers shape fairly well.	Nylon and polyester have little elasticity. Elastane has a high level of stretch and recovery.
Durability	Wool can be durable if fabric is tightly constructed.	Nylon and polyester last a long time and are resistant to abrasion.
Crease resistance	Wool does not crease easily. Cotton creases.	Nylon, polyester and elastane are crease resistant.
Thermal qualities	Wool has crimp that makes it a good insulator/warm. When wool absorbs moisture it gives off heat. Cotton is a poor insulator/cool.	Nylon and polyester poor insulators but can be engineered to improve thermal qualities.

Performance characteristics of the fibres used in the football kits		Figure 2: 100% wool top and socks, 100% cotton shorts	Figure 3: 71% nylon 26% polyester 3% elastane top and shorts.
Comfort		Some wool fibres may irritate the skin. Cotton is comfortable due to high absorbency.	Nylon and polyester are lightweight and smooth to the touch.
Stain resistance	Wool is stain repellent. Cotton will absorb water-borne stains.	Nylon and polyester are repellent to water-borne stains.	
Static	Wool and cotton are anti-static.	Nylon and polyester affected by static electricity.	
Resistance to moth larvae as well as bacteria and mildew	Wool attacked by moths, bacteria and mildew. Cotton can be affected by mildew.	Nylon, polyester and elastane are not affected by moths or mildew.	
Resistance to exposure to UV light and weakening	Wool has sensitivity to UV light degradation.	Nylon turns yellow and rots after long exposure to sunlight, polyester does not.	
Shrinkage	Wool and cotton prone to shrinking unless fibres are treated with a finish.	Nylon and polyester do not shrink.	
Lustre	Wool has no lustre Cotton has little lustre.	Nylon and polyester have smooth fibres with high lustre.	

Do not accept references to cost.

Award any other valid responses.

Student responses

Response A

The jumper in figure 2 is 100% wool meaning it is thermally insulating whereas in figure 3 the top is not thermally insulating with nylon and polyester. The top in figure 3 will be more durable and abrasion resistant with the use of synthetics compared to wool in figure 2 which is not so durable making it less practical for sporting activities. Wool can also be itchy so may cause irritating against the skin for the jumper in figure 2 whereas nylon and polyester are smooth and lightweight fibres which will be more comfortable for wearing in figure 3. Figure 2 shorts made out of cotton will have little elasticity whereas shorts in figure 3 will have good elasticity and stretch with the 3% elastane content. Figure 2 has woolen socks meaning moisture will be able to be wicked away easily. Figure 3 football kit will be more lightweight through the use of synthetic fibres making it more practical for sports than figure 2 kit. Figure 2 cotton socks will allow for breathability making them suitable for sports as perspiration will be present.

This is a high-level response

This response considers the fibre content of all the garments listed. Both football kits are analysed in detail including a wide range of different points from the indicative content. Performance characteristics such as thermal qualities, durability, comfort, elasticity and absorbency are referenced. Evaluative comments are made regarding the performance characteristics of the fibres in the context of sport. Contrasts between the performance characteristics of the football kit fibres are given. The response is sufficiently thorough to gain full marks.

6 marks

Response B

The football kits have the following fibre content:

Figure 2		Figure 3	
Jumper	100% wool	Top	71% nylon 26% polyester 3% elastane
Socks		Socks	
Shorts	100% cotton	Shorts	

soft on skin
breathable
flamable
firm

stretch
crease
resistant
strong

Figure 2's kit uses wool and cotton which are both natural fibres. Wool being used in the jumper and socks will keep the wearer warm as it is insulating due to its scale structure. Cotton used in the shorts in figure 2 will be breathable to keep the wearer cool and also strong so will withstand high levels of movement. Figure 3 however uses a nylon, polyester and elastane blend in all garments which harnesses the characteristics of each fibre. Both polyamide and polyester are strong so therefore durable and elastane creates a garment with ~~some~~ stretch so movement is easier ~~with~~ when wearing.

This is a mid-level response

The student has made some notes around the table in the question to plan the response. Correct points made in the planning such as 'cotton soft on skin' and 'nylon crease resistant' are given credit though they are not written about in the response. The response gives a range of different points from the indicative content regarding thermal qualities, strength and stretch. Both football kits are analysed with reference to all the garments but there is a lack of detail. Evaluative comments concern ease of movement in the garments. There is some comparing and contrasting but this is a weaker aspect of this response and overall, three marks are awarded.

3 marks

Question 3.2

Explain why furnishing fabric is tested in different ways before its use in public places.

[6 marks]

Mark scheme

AO4 2c

Marks	Description
5–6 marks	Detailed knowledge and understanding of why furnishing fabric is tested in different ways before use in public places. Thorough explanation with a range of mainly accurate information about the reasons for testing in different ways in the context of furnishing fabric for public places. There may be some minor irrelevant points but this will not detract from the overall quality of the response.
3–4 marks	Good knowledge and understanding of why furnishing fabric is tested in different ways before use in public places. Some explanation with some information about the reasons for testing in different ways in the context of furnishing fabric for public places. At the lower end of the mark band information may concern only one reason why furnishing fabric is tested but it will be in some detail.
1–2 marks	Basic knowledge and understanding of why furnishing fabric is tested in different ways before use in public places. Limited explanation about the reasons for testing in the context of furnishing fabric for public places. At the lower end of the mark band only one reason may be referred to and information given will be basic.
0 marks	No response or nothing worthy of credit.

Indicative content

Tests are carried out to:

- ensure **safety** of the public. Data from tests is used to judge the safety of furnishing fabric so that those selected for use are safe and reduce the dangers from fire in public places, such as flames, hot dripping fabric, smoke inhalation.
- **meet responsibilities/legal requirements** for furnishing fabric to be safe and enable it to be selected for use in line with fire safety legislation
- **provide information for fabric specifications** so that those selecting fabrics have detailed guidance
- ensure **dye transfer** does not occur on other fabrics
- give data about furnishing fabric **stability** so that those selected for public spaces will stand up to frequent use

- consider **durability** so that it is clear how long the fabric may last in good condition
- as part of **quality assurance** so that fabric meets **performance requirements** and **guarantees** can be made to customers
- **protect fabric/furnishing manufacturer reputation** so that customers return
- **promote brand image/brand values** so that customers trust the fabric supplier.

Award any other valid responses.

Student responses

Response A

Severity of burning for a furnishing fabric:

If the fabric is to be used in public ² (e.g. a café Sear) it is likely to undergo a lot of friction and thus, it is important to see whether it can withstand and be durable against ~~high levels of abrasion to be worth the~~ money paid for the furnishing. The fabric needs to be tested for ~~its~~ its reaction to fire because featuring a fabric which fiercely burns and ~~permeates~~ melts like a ~~Polyester~~ Polyester Cotton blend, could be very dangerous and cause ~~a~~ damage to the health of the public and lead to accusations of negligence ~~and being~~ unsafe practices.

It is important to test furnishing fabric (e.g. Curtains) for colour fastness and fire resistance to UV light because they will be frequently exposed to the sun and if they fade quickly and noticeably, then it will reflect badly ~~and~~ on the public establishment.

This is a high-level response

Safety of the public and the need to meet responsibilities is explained in detail in this response. This student understands that quality assurance is essential to customer safety and trust, and to the reputation of the public establishment. The context of this question is understood at a high level. Detailed knowledge is evident in the breadth of points made regarding the different ways that fabric is tested for durability, flammability and colourfastness. The question about why furnishing fabric is tested is answered with accurate points and thorough explanation. The response is worthy of full marks.

6 marks

Response B

It is tested in various ways to ensure high quality, non-faulty products. It is tested ~~down~~ at different periods of production for faults such as gathered threads, neat seams, no bulk fabric and functioning components. This is to ensure when it is purchased by the public that the product is to a high standard, is durable and functional. It also ensures the business doesn't receive criticism for products that are faulty. It will create brand loyalty with customers, which will result in more purchases and a better perspective).

This is a mid-level response

This response recognises that 'high quality, non-faulty products' and 'high standard, is durable and functional' are necessary qualities for furnishing fabrics used in public places. However, there is no reference to the different ways of testing furnishing fabric in the context of furnishing fabrics for public places. However, there is a good level of knowledge and understanding of the reasons why quality assurance, company reputation and customer loyalty are important considerations. Marks are awarded at the lower end of the mid-mark band.

3 marks

9-mark question

Extended writing

Question 6

Describe Paul Poiret's fashion designs and explain how his work went on to influence 1920s Art Deco fashion.

Give examples of his work in your answer.

[9 marks]

Mark scheme

AO4 2b

Marks	Description
7–9 marks	Detailed description of the key aspects of Paul Poiret's fashion designs. Thorough explanation and in depth understanding of how Paul Poiret's fashion designs influenced Art Deco fashion. There may be some minor irrelevant points but this will not detract from the overall quality of the response. At the top end of the mark band a variety of examples of his work will be referenced and some are described in detail.
4–6 marks	Good description of the key aspects of Paul Poiret's fashion designs. Some explanation and good understanding of how Paul Poiret's fashion designs influenced Art Deco fashion. Some relevant examples of Paul Poiret's fashion designs. There may only be a limited range of examples of his work, with some detail in the response.
1–3 marks	Basic description of the key aspects of Paul Poiret's fashion designs. Limited explanation and basic understanding of how Paul Poiret's fashion designs influenced Art Deco fashion. There may be some confusion about Paul Poiret's work and/or Art Deco fashion. In this mark band, there may be few or no examples or description of his work.
0 marks	No response or nothing worthy of credit.

Indicative content

Paul Poiret's fashion designs:

- were **draped** rather than having the previously popular tailored garment structure
- often had a **simple structure**
- had no **corsets or petticoats**
- were cut along straight lines and constructed from rectangles
- were influenced by the Ballet Russes' costume designs
- featured folkloric, ethnic trimmings and **fantasy** themes
- included **bright vivid colours**
- included use of **decadent and luxurious materials** such as velvets, metallic fabric, silks, furs, feathers, lace, embroidery and applique
- featured **exotic oriental influences**
- included **accessories such as turbans**.

Paul Poiret's influence on Art Deco fashion:

- geometric shapes and abstract forms
- garment styles influenced by the orient
- glamorous rich materials with surface sheen
- beading, jewels and other surface embellishment
- cut of hemlines eg high/low, asymmetric, handkerchief etc.
- turban style head wear
- straight and loose styling of 1920's flapper dresses with a waistline at the hips, bare backs and narrow shoulder straps
- clothing hung from shoulders with loose flowing lines rather than the previously popular tight waists and corseted silhouette
- romantic theatrical designs.

Examples of his work:

- lampshade tunic with short hem length held out in a hula hoop shape, worn over a long hobble skirt or harem pants
- harem pants/pantaloons/trousers with very loose, full shape, gathered at the ankle
- hobble skirt which restricted movement due to long length, narrow at ankles
- kimono style capes and coats with wide sleeves, overlapped fronts and simple structure
- oriental inspired decorative costumes for lavish fancy dress balls
- exotic fashion accessories such as turbans and feathers.

Award any other valid responses.

Student responses

Response A

influence 1920s Art Deco fashion. → post WWI

* hung from the body with
~~at~~ dropped waistlines.
 Paul Poiret liberated women from
 tight corsets ~~and~~ and
 introduced dresses for women
 which were inspired by Japanese
 fashion eg the kimono, and created
 garments by draping fabric ^{over the body.} ~~the~~

He was inspired by oriental and exotic
 influences leading him to create
 the 'hobble skirt' which nipped in
 at the waist and ankles allowing
 only small steps, as well as Harem
 pantaloons, tunics, turbans and
 other oriental designs. Art deco
 was a movement in fashion which
 included geometric shapes and

bright block colours. It used straight bold lines commonly used on cruise ships & train station entrances and Poiret's designs fitted into this criteria. ~~an~~

Art Deco was a movement against strict art styles and was a more modern approach to art. Poiret also took against standards for example freeing women from restrictive corsets and creating draped dresses which ~~★~~

This is a high-level response

A very good understanding how Paul Poiret's fashion designs influenced 1920s Art Deco fashion is demonstrated by the description of modern draped garments without corsets and with a waistline at the hips. Some key aspects of Art Deco are identified such as geometric shapes, bright block colours and bold lines and to some extent the influence of Paul Poiret's designs are explained. Oriental and exotic influences are referenced with the example of the kimono. However, the cut of hemlines, use of decadent and luxurious materials and rich surface decoration are not mentioned. There are relevant examples of Paul Poiret's fashion designs – hobble skirt, harem pantaloons and turbans with some description. Overall, although this is a very good response there is insufficient detail and depth of understanding to gain marks in the top mark band.

6 marks

Response B

Paul Poiret was influenced by oriental era and the ballet russes costumes. His most iconic garments include the hobble skirt which was tightened at the knee, harem pants as well as the lampshade tunic.

Poiret is well known for his contribution to draping. This led to looser fitting more freeing garments that were corset free compared to restrictive clothing of the previous decade. This influence is seen in 1920s art deco fashion where women were corset free. Also ^{with} the 'garçonne look' with short bob haircuts, flattening of the chest and straighter silhouettes, women moved towards an androgynous style. Poiret's influence on 1920s art deco fashion can also be seen in the tubular styles with lots of pleats and gathers achieved from draping. Poiret's designs also featured lots of extravagant embellishment and colours. This influence is seen in the high-end fabrics of 1920s art deco fashion with velvets and lots of beading.

This is a mid-level response

This response demonstrates some good understanding of Art Deco and the influence of Paul Poiret's fashion designs. Oriental style and flapper dresses are mentioned although there is little description. The reference to corsets is incorrect as Poiret was known for his use of softer less restricting undergarments. Some examples of his work are given – hobble skirt, turban hat and lampshade tunic but with little detail. Description of draped loose fitting shorter dresses and mention of embellished velvet are given credit. Overall, there is just enough to gain marks in the mid mark band.

4 marks

Response C

Paul Poiret loosened the corset style for women on clothing helping them be more free. The roaring 20's was when clothing had brighter colours more use of geometric shapes and was mainly inspired by costumes which were being used in films and shows. His work was different than others as he experimented with different silhouettes and fittings of clothing e.g the pants he made, hobble skirt and the box style jackets. He expressed the change from the old world to the new modern world in his fashion clothing which was then used in the 20's. Shorter length skirts and dresses were ~~newer~~ ^{new} for women as well.

This is a low-level response

There is limited detail in this response with basic understanding of how Paul Poiret's fashion designs influenced Art Deco. Relevant points are made regarding looser style, brighter colours, geometric shapes and shorter lengths but there is little description and limited explanation. There are few examples of Paul Poiret's fashion designs in the response. The hobble skirt is listed rather than described and other references to his work are vague. This student understands that there was change in fashion to a 'new modern world' but there is insufficient explanation and understanding to gain marks in the mid mark band.

2 marks

Get help and support

Visit our website for information, guidance, support and resources at **aqa.org.uk/7562**

You can talk directly to the Design Technology subject team

E: **dandt@aca.org.uk**

T: **0161 957 3334**

Copyright © 2024 AQA and its licensors. All rights reserved.

AQA Education (AQA) is a registered charity (registered charity number 1073334) and a company limited by guarantee registered in England and Wales (company number 3644723).

Registered address: AQA, Devas Street, Manchester M15 6EX.

