

Candidate 3

ENTER NUMBER OF QUESTION	<p>2a Car for chosen product.</p> <ul style="list-style-type: none"> • During the 1970s/^{1980s} 1980s people have become more aware of safety with cars so more safety features have been added such as seatbelts or airbags. • Society in more recent years has become more aware of how carbon emissions has impacted the environment so car companies have started converting to electric or battery powered cars. • Peoples family have changed in size as families can be larger or smaller so cars have been adapted to have more space for people and more storage. • Society has had had more requirements so features such as air conditioning or music players has been added to cars. • Society has now been influenced to recycle more products so cars can now be fixed a lot easier and parts can be replaced instead of wasting parts. <p>2b. Iron for chosen product.</p> <ul style="list-style-type: none"> • During the creation of teflon during the 1950s/1960s it was added to the iron as it had non stick properties meaning it could glide through clothing easier. • In the 1930s/1940s electricity was added to the iron and made more widely available to peoples houses meaning coal was not needed as was a source of heating for the iron. • In the ^{1950s} 1960s polypropylene was introduced into the manufacture of the iron as the main material for the body of the iron which improved the iron as meant there was less heat conducted making the iron safer. • Aluminium was added to irons around the 1930s/1940s which made a large improvement as it meant the iron did not rust or water ^{so steam} could be added to iron clothing easier. 	DO NOT WRITE IN THIS MARGIN
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- 2b After WW2 not many people had time to iron clothes so they need fast and easy
- During 1940s/1950s mass manufacture was more common as lots of people needed an affordable iron so injection moulding became a more suitable option for making irons.
 - During the 1960s/1970s copper wire was added to the iron as a form of heating it up faster. This led to irons working more efficiently and made easier to use.
- 2c Dyson Hoover created a bagless iron which turned into one of the best commercial successes in history as they were bought in millions. This led to other companies copying and soon most hoover companies had a bagless model.
- Tesla had introduced one of the first modernised electric cars which had made people convert as people want to preserve the environment in a green affordable way. From this other companies made electric or hybrid cars.
 - Apple introduced the first touch screen to mobile phones meaning phones became easier to use and had a larger variety of settings. This made competitors want this technology so now most modern ~~phone~~ companies have a touch screen phone.
 - Nike created a shoe that had air bubbles in the sole which made shoes easier to wear and allowed for sports to be made easier to play. This meant certain sports such as running had an increase in agility as shoes were made more comfortable to use.

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3a	<ul style="list-style-type: none">• This allows for the designer(s) to know if there are any specific materials needed for the design which may have influenced the aesthetics or function of the design.• Allows the designer(s) to have a clear understanding of what the product should do, or if there are any secondary functions the product should be able to do.• Means the designers can know the target market and carry out any research they may need to know about the target market, in order to ensure they meet the specifications.• Makes sure the designers can know if there are any safety requirements to be met when designing the product so people are safe with the product and will not harm themselves.
3b	<ul style="list-style-type: none">• The materials would have needed to be fire resistant / fire proof as will be chucked into a fire so will need to last so it can convert the air.• Non toxic materials would have needed to be selected so that there is no toxic fumes which may harm people on top of the smoke.• Water proof materials would need to be chosen as the Air-Pocket may be put into a building where water sprinklers have gone off so would need to not conduct electricity in case it made contact with someone in water.• Lightweight materials would have needed to be chosen as it will need to be thrown far into a burning building to help out people.
3c	<ul style="list-style-type: none">• Magazine adverts - This would have been suitable if there was an article about fire safety or equipment in a targeted advert for firefighters.• Online adverts - Would have been suitable if people were investing in new equipment online and wanted more targeted adverts about new fire safety equipment.

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- 4a
- Sketches may not provide enough information about a product and if it will work well however it is an easy and fast way of generating ideas.
 - Morphological Analysis may be useful for gathering a large range of ideas however some of the ideas may be a flop ~~so~~ so may not be effective for using.
 - Models allow for the designer to visualise their product more so can end up gaining ideas they may struggle to get on paper however this may mean the designer will not know if the product can be made effectively.
 - Brainstorming with a group of people may ~~put~~ ^{give} designers new ideas however the designer may then struggle to get people talking in a large group.
- 4b
- Injection moulding would have been a suitable process for the hinge ~~as~~ ^{as} it is a complex shape with small details so would need to be made precisely.
 - The clip could have been made using injection moulding so it could have been made in large amounts so the clip would have been replaced. It also needs to be made strong and accurate so injection moulding is the most suitable method.
 - Two-shot moulding was an effective choice as the elastomer and the polypropylene would have needed to be joined together and two shot moulding can combine two materials without them breaking apart.
 - Two-shot moulding and injection moulding can be used on a complex shape so was an effective choice for the shape of the pin and part holder part.

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- 4c
- There should have been a large enough gap or a gap so small that a finger cannot be trapped in the hinge when opening or closing the Manofing
 - The clips should have a large enough gap so that people do not get their hands or fingers caught in the strap
 - The material around the foot should have been made to a suitable thickness so that if there was a tear in the Manofing it wouldn't hurt the user or get caught on their feet.
 - The straps should be made easy to be undone as they may need to be ~~used in~~ ⁱⁿ a hurry ~~so~~ ^{as} the user may have injured their feet.
- 5a
- With 3D printers becoming a more popular form of manufacture, this may have ~~led to~~ led to the ~~manufacture~~ manufacture of the shoe more popular.
 - With more plastics being recycled the 3D printer can use them to make components of the shoe so there is no new plastics being made so more sustainable.

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- Sb
- This means products can be made directly from computer models and if a ~~one~~ person has a 3D printer and appropriate software then may be able to manufacture the product from home.
 - This means there is less if not no left over or waste materials as the 3D printer models the exact model with little/no added material.
 - With the outer shape being a very complex shape 3D printers are a suitable choice as can ~~then~~ make extremely complex 3D forms.
 - 3D printers can also use recycled plastics so is a more environmentally friendly form of manufacturing products.
- Sc
- Lack of advertising may effect a product coming to the market. as if there are lots of people unaware of the product then it may not be a success right away.
 - lack of customer trust may be effecting the new product as people may have never heard of the company so unaware of reputation.
- Sd
- People may be skeptical as may be a new technology so may want product to be tested/checked/verified by a professional in the related field.
 - Lack of knowledge about the product or company may be an issue so extensive advertisement may be needed to try get the product noticed.
 - May not work effectively when launched so the designer or company may need to do a product recall which may effect their reputation.
 - Change may be too complex for the intended target market so simplified version may need to be made for the user.

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- 6a
- The strength a person needs to push the pedals around on the seat ~~will~~ ^{will} have been considered to make sure a large range of users can pedal ~~the~~ 'The-O' comfortably.
 - The strength someone needs to move 'The O' may have been considered as it is highly likely to be moved around a lot.
 - The simple shape may have influenced how the user interacts with 'The O' as it looks very minimalistic so therefore simple to use.
 - The simple ~~colour~~ ^{colour} scheme may have influenced if the user will want to buy the product and as the white looks like a safe option for the user and the shiny metal suggests it looks clean and easy to maintain.
- 6b
- The design would have had to have looked efficient as it will be used as furniture but also as if it would work efficiently as will be used for exercise.
 - The height of the seat may have conflicted with the look of the product as it needs to be tall enough so the user is comfortable but at the correct height for it to be a shelf.
 - The pedals will have to be made to look simple and efficient to fit the design environment but not ~~too~~ ^{too} complex since so the user can have their feet secure when in use.
 - The metal form needed to look simple so that the O looked as if it could hold the weight of the person whilst remaining simple looking as it is also furniture.

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bc The complexity of the part will have been considered as Die casting ~~can~~ can make very complex metal forms. So may have been used for smaller parts such as the pedal.

The strength of the part may be considered as if a part needed to remain very strong then die-casting may have been the wrong method.

What thickness the part or the metal is may have influenced the part was die-cast as if the part is too thin then the die casting may have been an unsuccessful approach as the metal may not be strong enough.