

Production Aids

1 A company is producing a batch of shelving units. The shelving units need side panels that have pre-drilled holes for the shelf supports. They have decided to use a drilling jig to make the holes.

a) Describe what a jig does.

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[1 mark]

b) Give **two** advantages of using a drilling jig instead of marking out and drilling the holes by hand.

1.
 2.
[2 marks]

2 **Figure 1** shows a prototype of a birthday card. It's been made by drawing individual balloon and candle shapes by hand, cutting them out and sticking them on top of each other to give a 3D effect.

a) In the space below, sketch a template that could be used to make a batch of 200 of these cards.

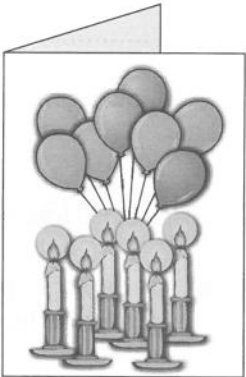


Figure 1

[1 mark]

b) State a material that the template could be made from. Explain your choice of material.

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[2 marks]

c) Describe how a template is used.

.....

[1 mark]

3 Patterns are production aids. They are used in textiles and when casting materials including metals and plastics.

a) Briefly describe how textiles products can be made on a small-scale using patterns.

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[3 marks]

b) i) State **one** material that a casting pattern can be made from.

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[1 mark]

ii) Give **two** benefits of using a pattern to cast a material.

1.

2.

[2 marks]

4 A company are making a placemat and coaster set. **Figure 2** shows the design for the coaster. The company wants to increase the size of the design by a scale factor of **two** to make the placemat. On **Figure 2**, draw the placemat. Use the datum, i.e. (0,0), as a reference point.

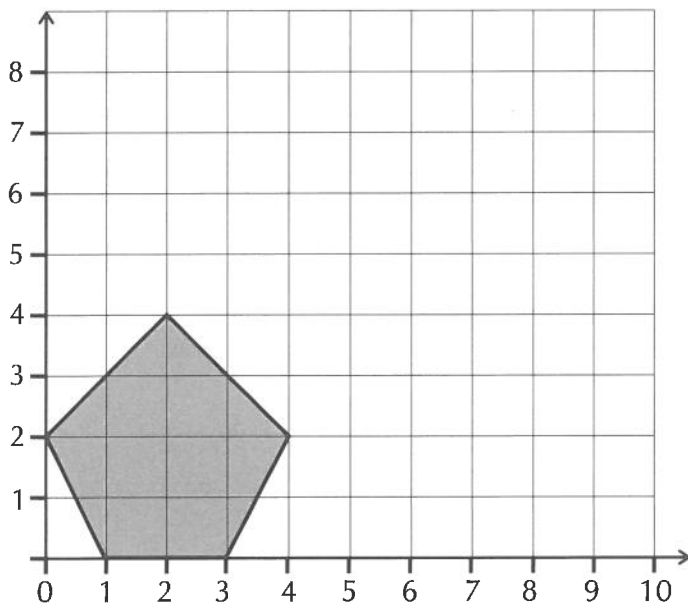


Figure 2

You can use this space to show your working.

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[2 marks]

Score: / 15

Exam Practice Tip

When answering a question that involves a calculation, you should write down any working out that you do. This is important, because even if you get the final answer wrong, you can still pick up some marks if your working is correct.

☹️ 😊 😄