

2019

PATENT ATTORNEYS

EXAMINATION

PAPER D

The Preparation of Specifications
for New Zealand Patents

Regulation 158 (1) (d)

Duration: 4 hours (plus 10 minutes for reading)

General instructions for this question:

Only the prior art that is referred to is to be taken into account in your answer. You must not take into account any prior art that you are separately aware of.

This exam has only one question with two parts for a total mark of 100 for the paper.

An additional set of drawings is provided at the end of this question that you may use in your answer.

You have a meeting with a new client Tor, to talk about a new idea he's working on. Tor is a holistic healer. He has spent a lot of time travelling through India where he discovered the health benefits of a traditional bed of nails. Tor has suffered from back problems for many years and he says that lying on the bed of nails has helped him deal with his back pain.

Tor explains to you that a traditional bed of nails is a rectangular piece of wood that is about the size of a single bed. The bed has nails extending upwardly from the wood with the points of the nails exposed. Tor tells you that the bed of nails is used by a person lying on the points of the nails. The nails do not pierce the user's skin because their weight is evenly distributed across all the nails. Tor says the bed of nails helps promote blood circulation and reduces pain. Tor shows you a drawing of a traditional bed of nails, which is Figure 1.

Now that Tor is back in New Zealand, he has come up with the idea of a product that is like a bed of nails, but it has the added benefit that he can take this product travelling. He shows you his first prototype: it's a piece of rubber with a lot of office drawing pins sticking out of it. The office pins are about 5mm apart. Tor tells you that when he lies on it, his body weight is evenly distributed, and it provides a similar effect to the traditional bed of nails. The piece of rubber can be rolled up, or folded with the pins on the inside, and Tor can take the mat travelling with him on his next trip overseas.

Tor explains to you that this prototype looks pretty rough, but the product he intends to sell will look quite different to this prototype. Tor also has some drawings of the commercial form of his product, which are shown in Figures 3 to 9. The product is a rectangular rubber mat. Tor says his preference is to make the mat from a natural rubber. But he says it could also be made from a synthetic rubber, or a plastics material such as polyethylene or polypropylene.

On the top layer of the mat, there are a number of hexagonal discs. The discs are arranged in rows. Tor says the discs need to be made from a hard material, which will probably be a type of plastics material.

Figures 3-5 show details of one of the discs that has a number of spikes. The spikes look a bit like pyramids. Each of these discs has two sets of spikes with one set in the middle of the disc and the other set on the edge of the disc.

Each disc also has a hole right in the middle, which receives a retaining plug for fixing the disc to the mat. Tor tells you that when the mat is being manufactured, a number of holes will be punched in the mat. Figure 6 shows the mat with a number of discs attached to the mat. There are also

some holes that don't have discs attached yet. The holes are each located where the centres of the discs will eventually be positioned. To assemble the discs with the mat, a disc is placed on the mat and centred with the hole. From the other side of the mat, a plug is inserted through the hole. The plug is a snap-fit with the disc, as shown in Figures 7A and 8. Figures 3 and 4 show a disc with a simple circular hole, which is used with a snap-fit retaining plug.

Tor has also thought that another option would be for the plug to have two extensions and the holes having similar shaped cut-outs that form a bayonet fitting, like a lightbulb. Figure 5 shows a disc with additional cut outs for the bayonet retaining plug. As shown in Figure 7B, the plug is inserted with the extensions in the cut-outs, then rotated 90 degrees to lock the plug, disc, and mat together.

Tor says the discs could have different shapes and the spikes could have different shapes too. He shows you drawings of all the different shapes he's thought about (Figure 9). Tor plans to sell the discs as replacement parts. Different shapes provide different sensations for the user.

The mat is intended to be used in the same way as a traditional bed of nails – a user lies on the mat with the spikes pressing against their back. However, Tor also has the idea of adding straps, so the user can strap the mat to their back. The user can then lean against the mat when they are sitting in a chair, or when they are driving.

The rubber mat allows the product to be rolled up or folded for travelling and storage. Tor also thinks that the rubber material reduces the pressure that the user experiences. Tor plans to make and sell a range of products having a range of different types of rubber. Some will be softer, which will provide different pressures for the user to experience.

Tor is thinking about a modification that also includes magnets. The magnets could be concealed inside the mat, or positioned on the opposite side to the spikes. Tor says that a lot of people think magnets provide healing properties.

After asking Tor if he knows about any similar products, he mentions his mat is a bit like a rubber door mat, which has integral protuberances that people can use to wipe their feet. Figure 2 shows an example of a rubber door mat.

During your meeting, Tor lets you know that he has kept this idea confidential so far, but he wants to start making and selling his product soon. You discuss the options of filing a patent application as a provisional, or as a complete specification. After your discussion, Tor decides he wants to file a complete specification because he doesn't want to make any changes to his product.

[QUESTION OVER PAGE]

Question

Draft a complete specification for filing at the Intellectual Property Office of New Zealand. As part of your answer, write an email or letter to Tor explaining the approach you have taken with your claims and the patent specification. You should include the following:

1. An explanation of the patent specification and which parts you want him to pay particular attention to.
2. An explanation of the terminology you have used in the claims and the specification.
3. Any questions you have for Tor.
4. Any advice you have for Tor after the patent application is filed.

Mark allocation

Complete specification	85 marks
Letter to Tor	15 marks
TOTAL MARKS	100 marks

[END OF QUESTION]

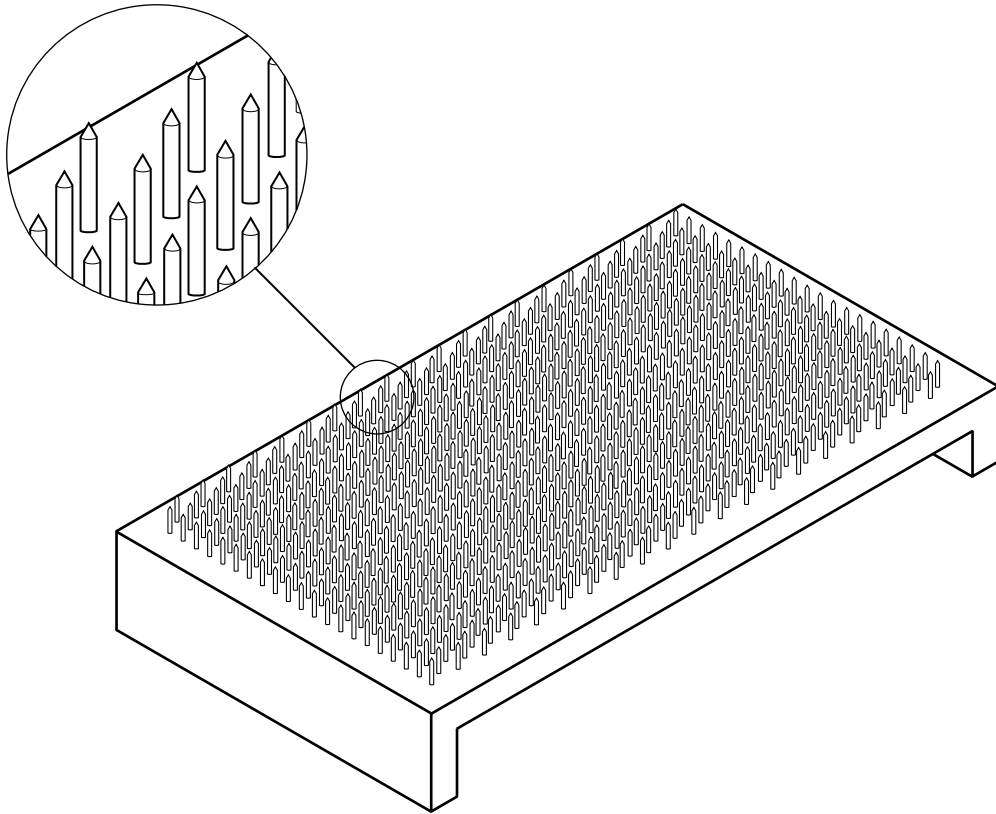


FIGURE 1

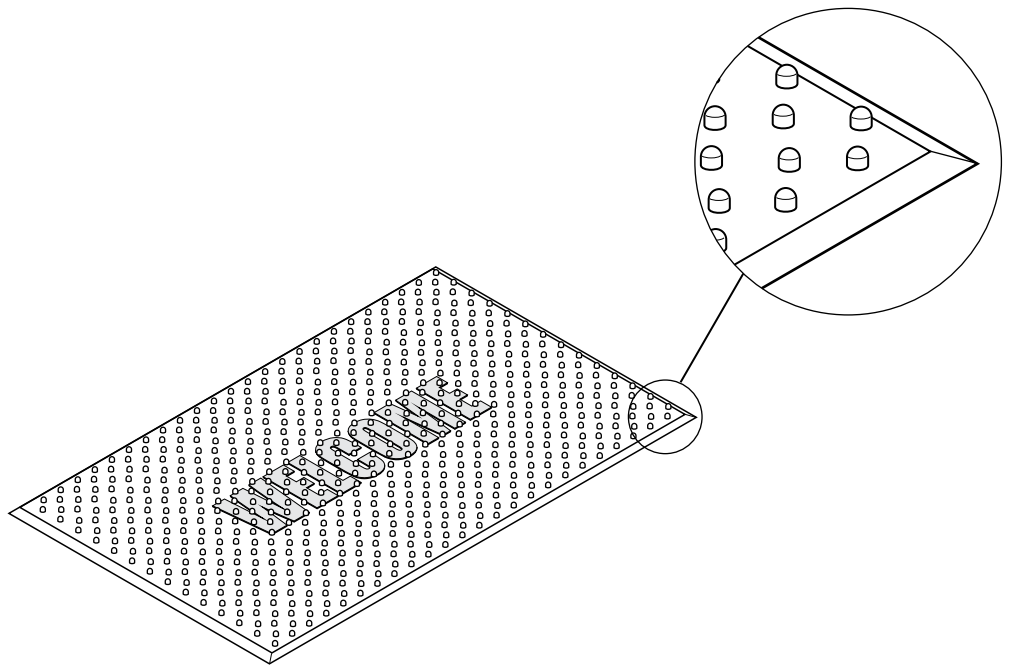


FIGURE 2

FIGURE 3

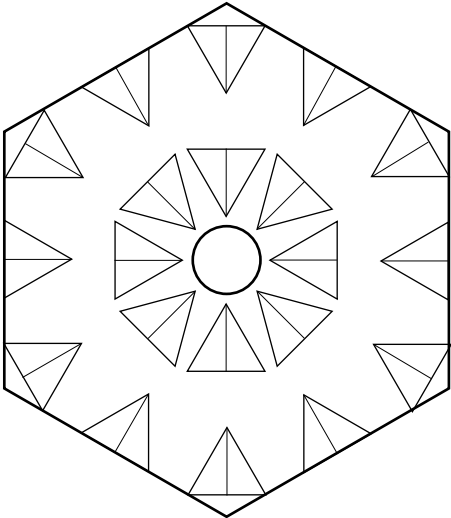


FIGURE 4

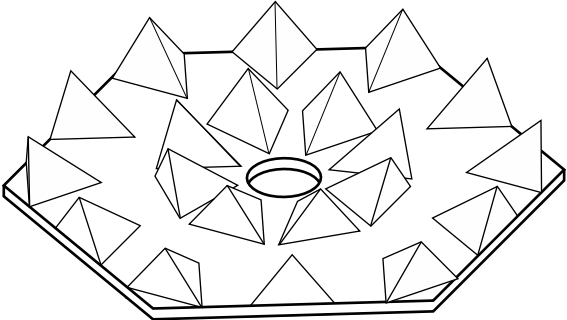
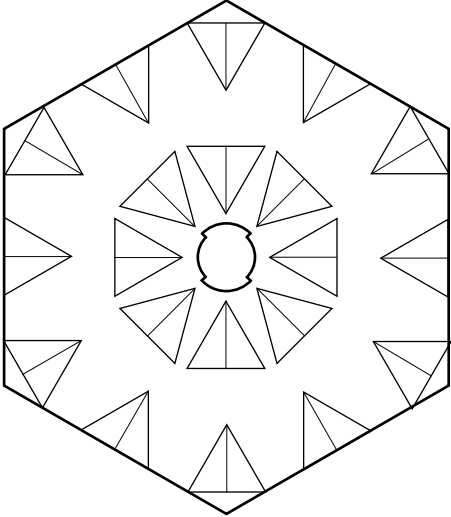


FIGURE 5



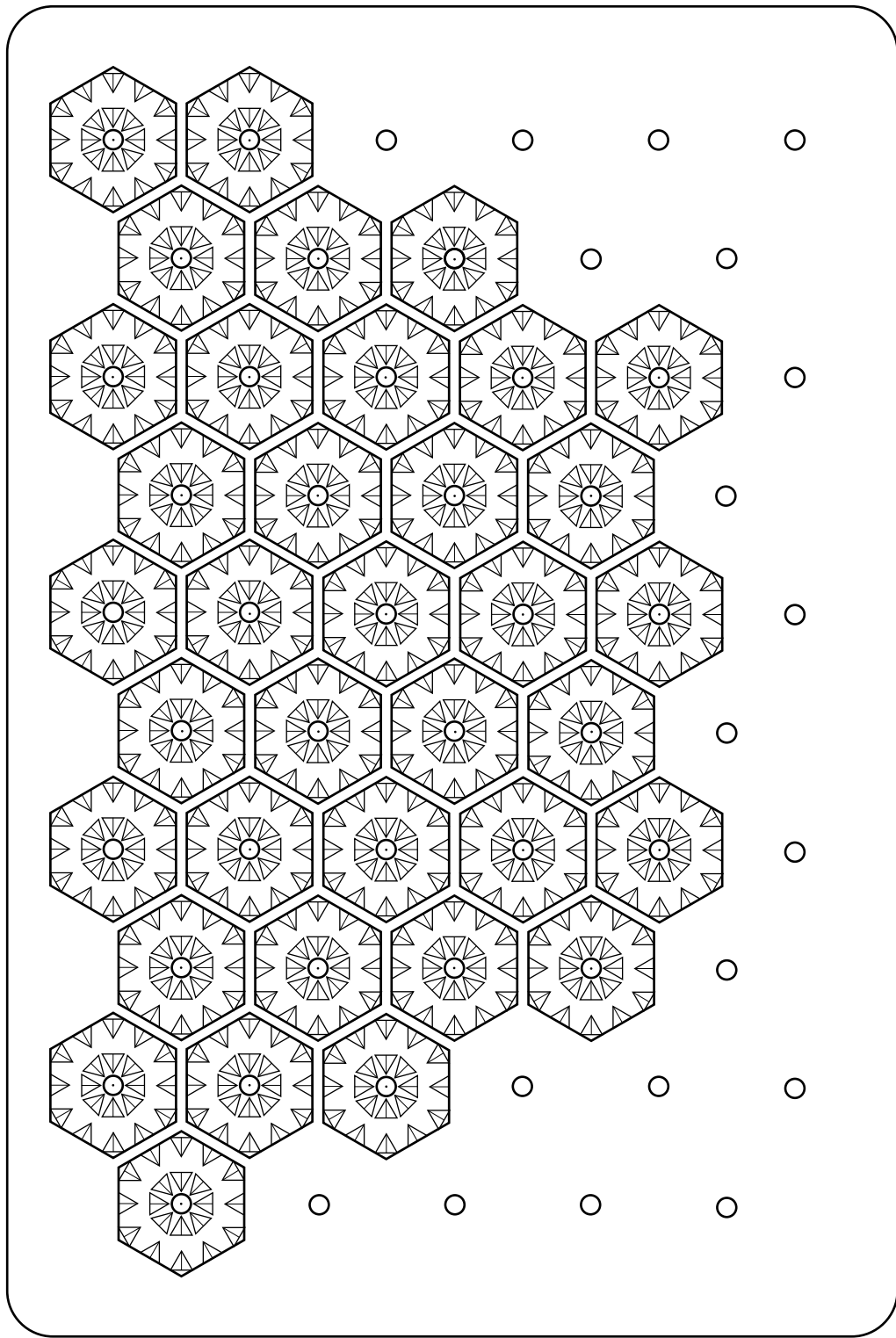


FIGURE 6

FIGURE 7A

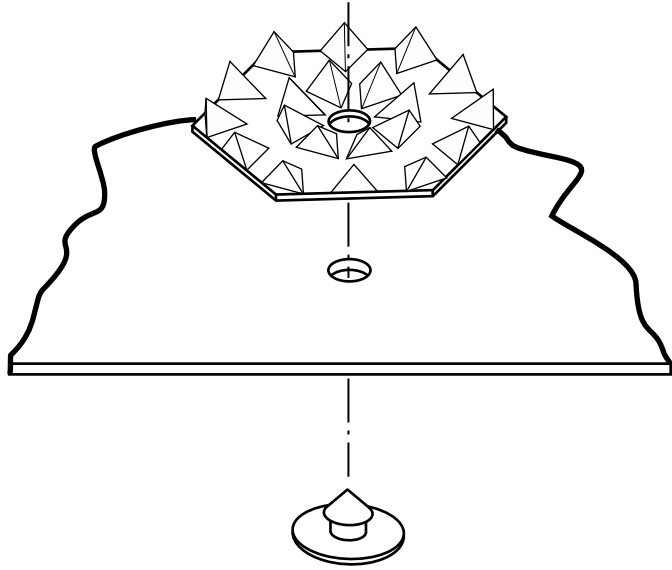


FIGURE 7B

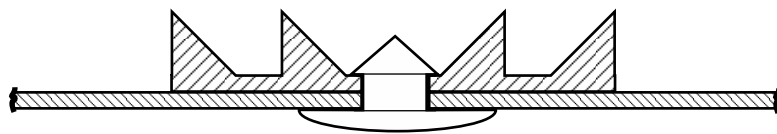
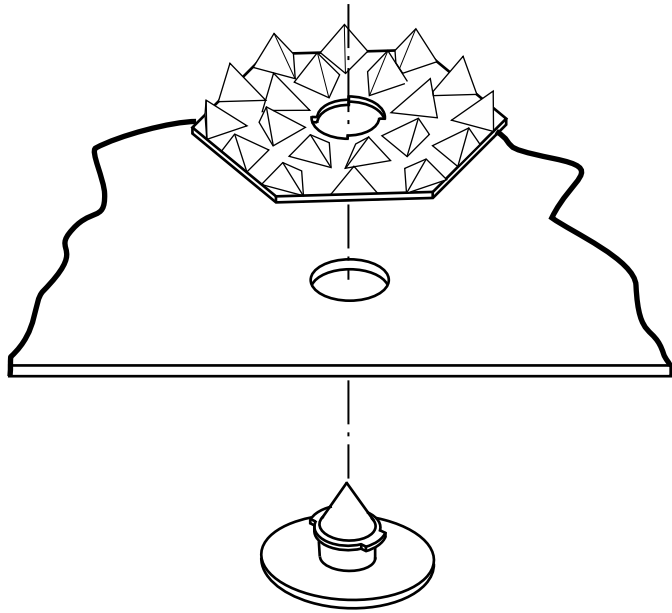


FIGURE 8

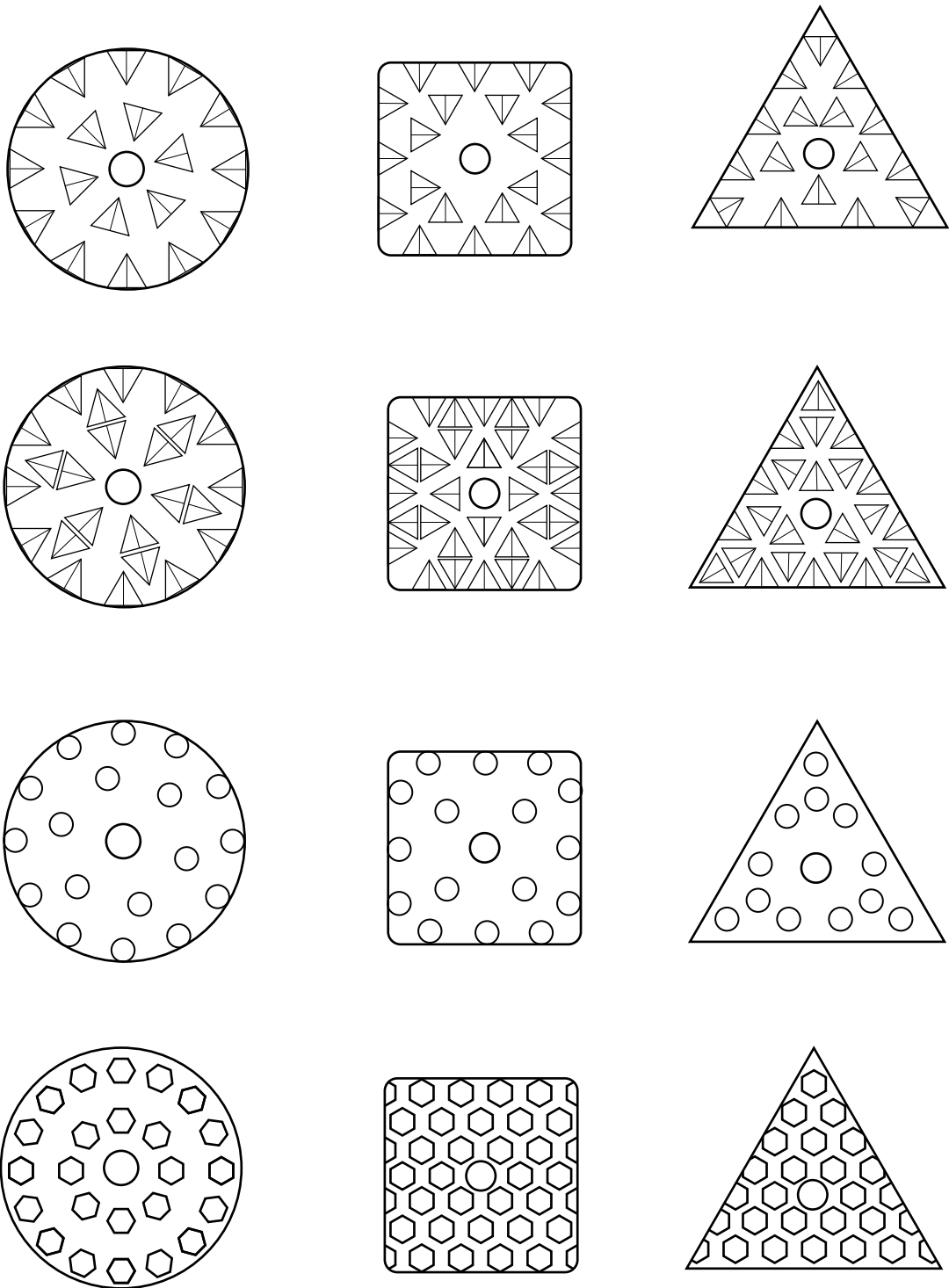


FIGURE 9

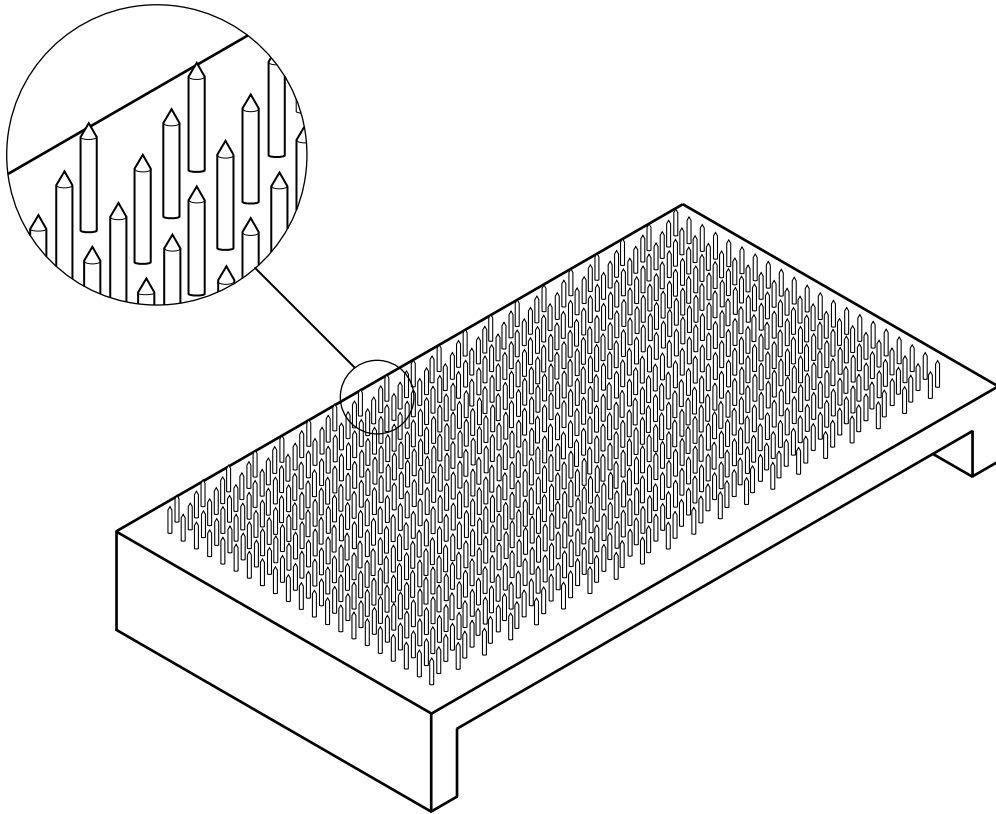


FIGURE 1

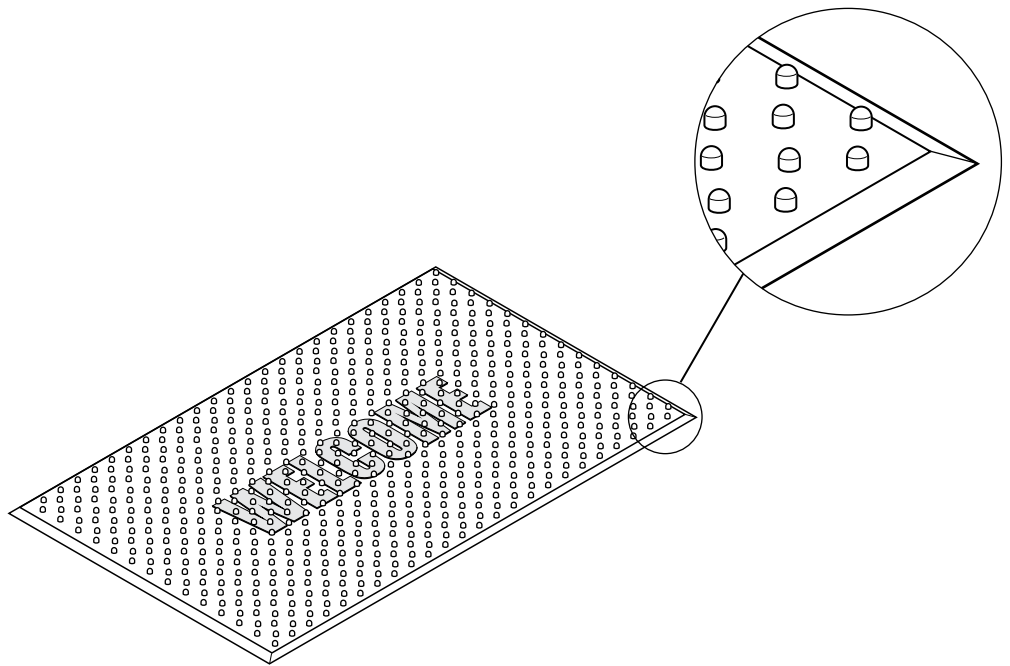


FIGURE 2

FIGURE 3

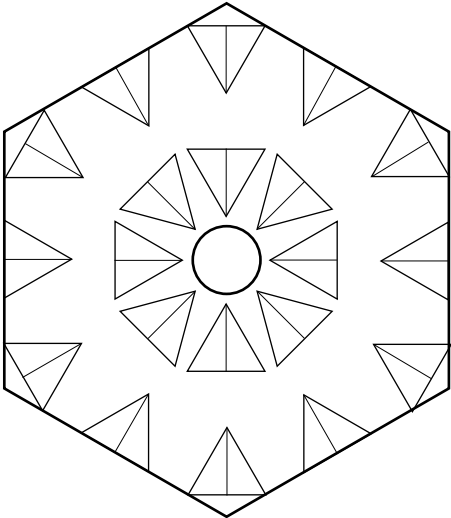


FIGURE 4

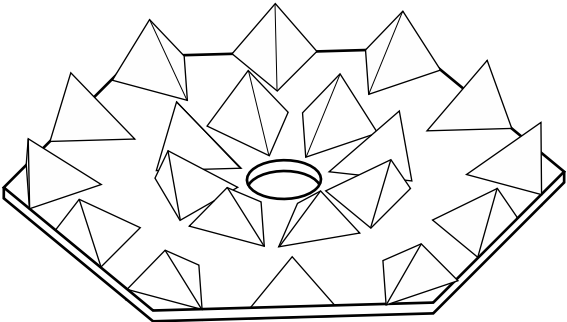
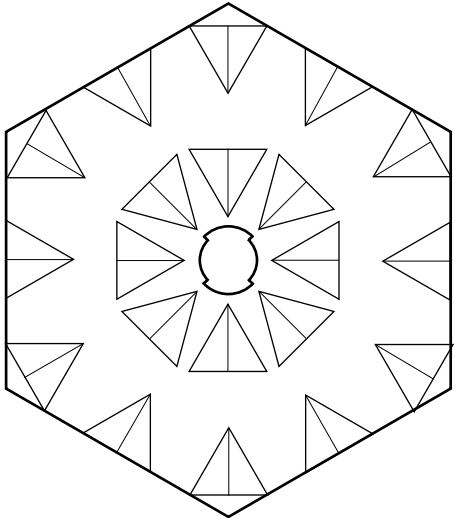


FIGURE 5



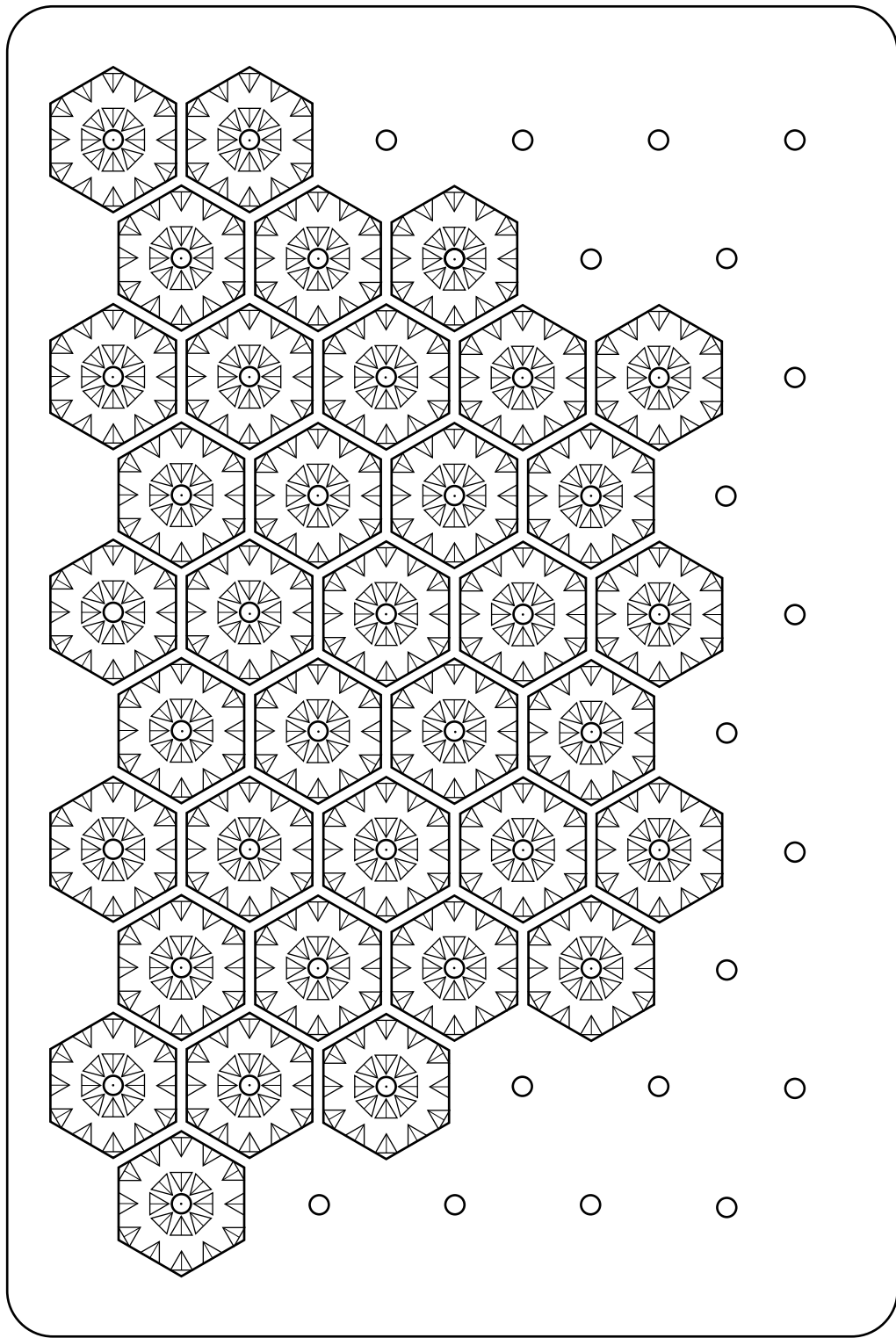


FIGURE 6

FIGURE 7A

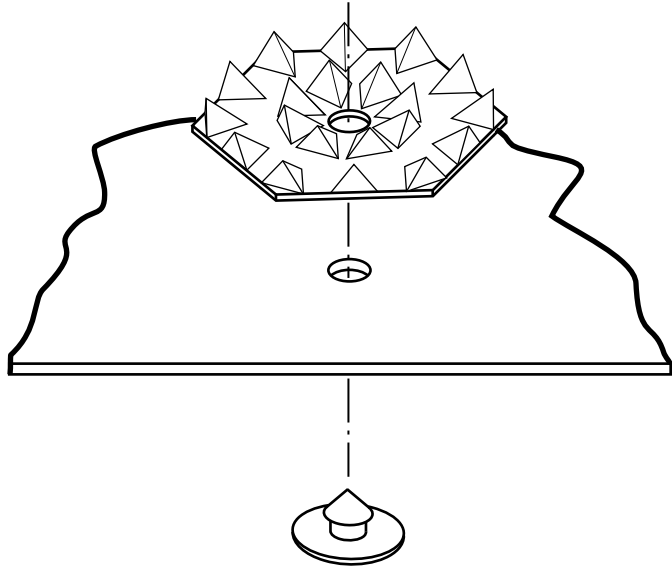


FIGURE 7B

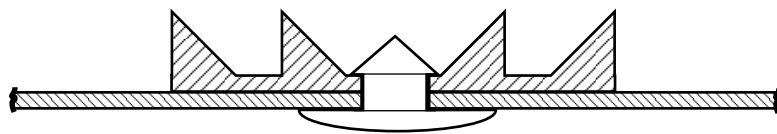
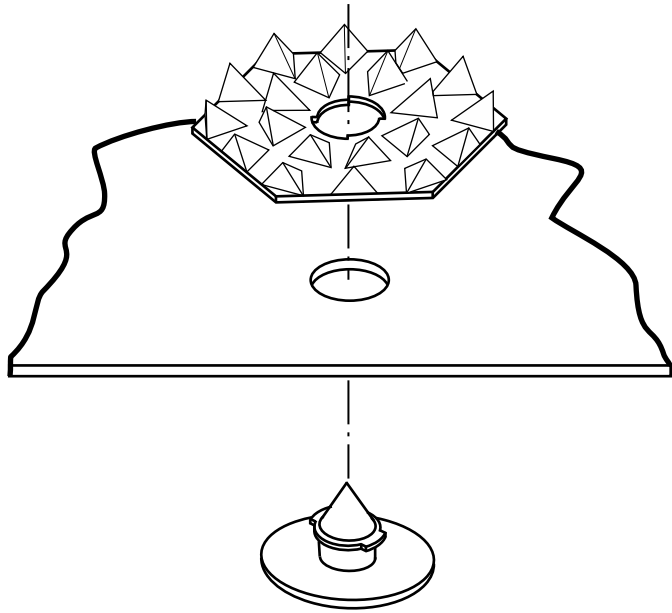


FIGURE 8

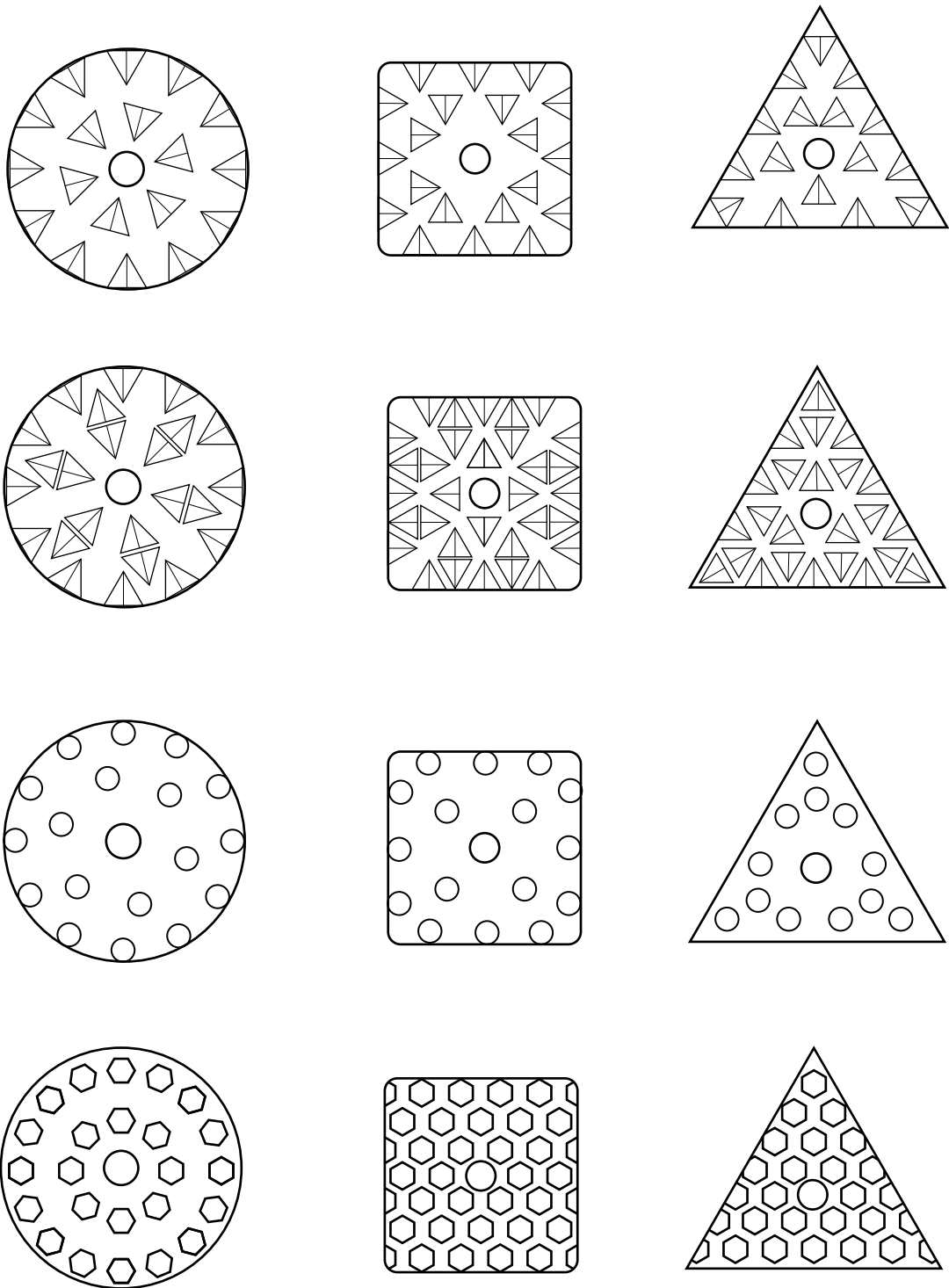


FIGURE 9