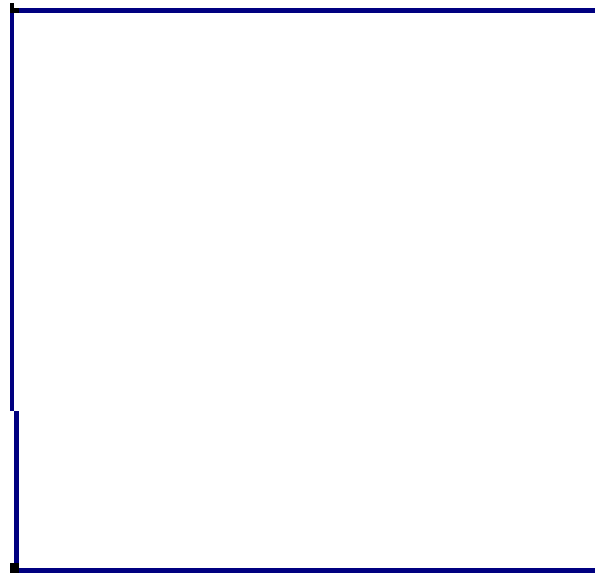
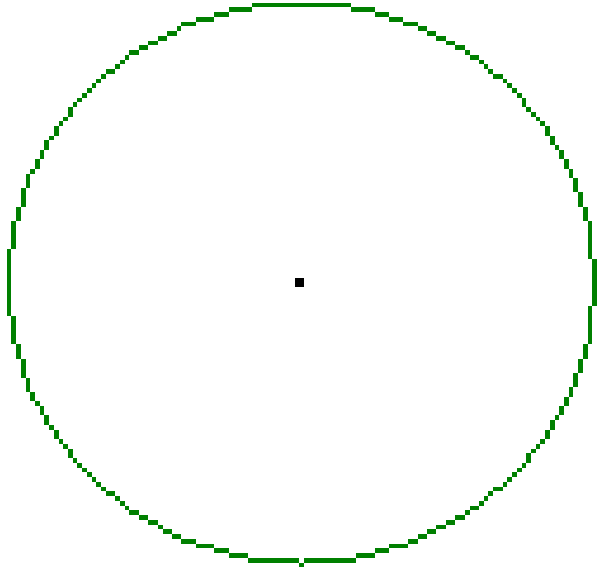


수학 탐구 발표대회 어떻게 했을까?

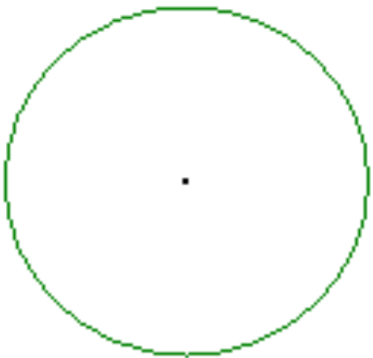
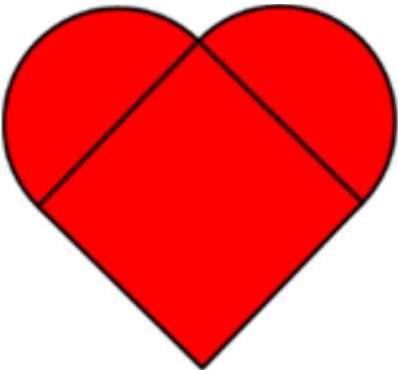
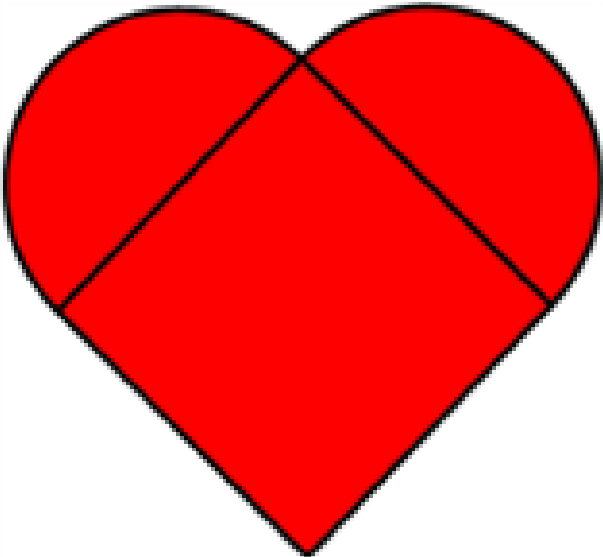
수학 학습에 대한 관심과 흥미를 위한 정의적 측면
으로 작도를 통한 무늬 디자인 및 패턴 찾기(작도)

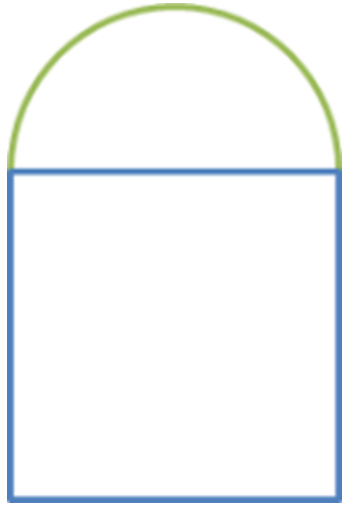
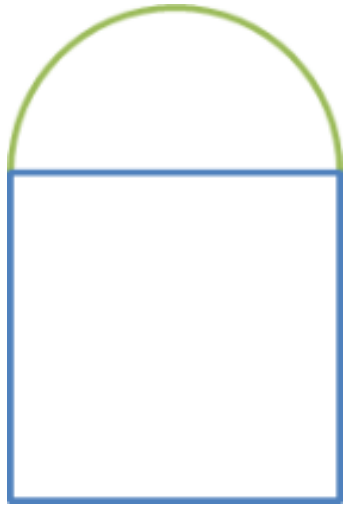
정사각형과 원으로 상상 할 수 있는 수학적 상상을 통해 수학 수업의 활용한 예를
알아본다.(원의 지름과 정사각형의 한 변의 길이는 같다.)



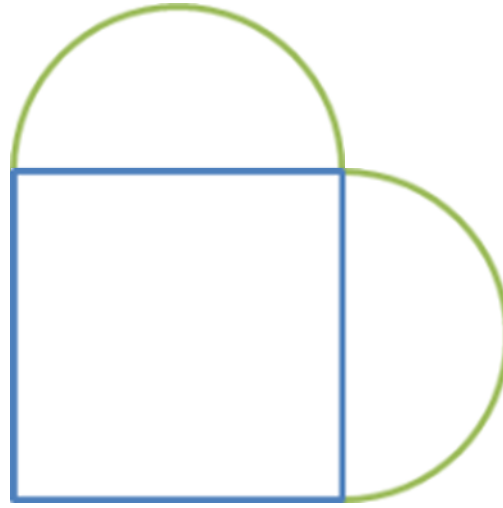
원 와 정사각형을 이용하여 하나의 무늬를 만들어 보자.
무엇을 만들 수 있을까?
어떻게 하면 될까?

원을 반원으로 분할하여 정사각형과 결합 한다






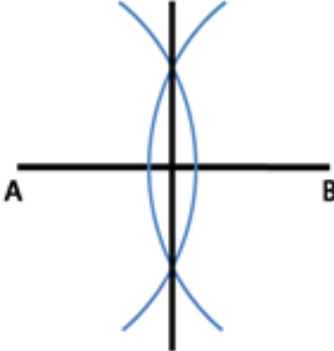
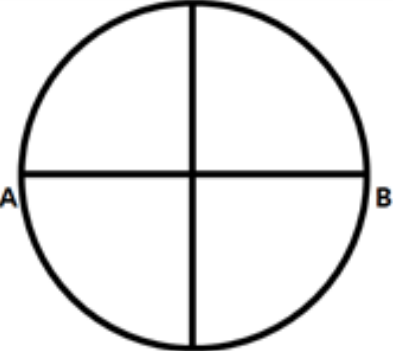
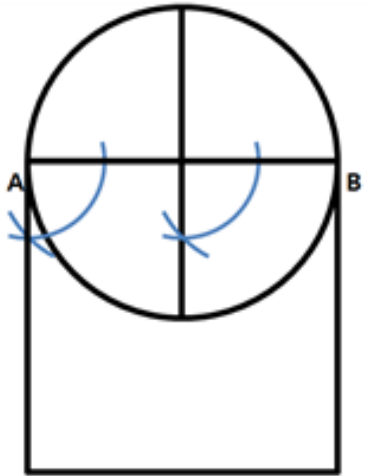
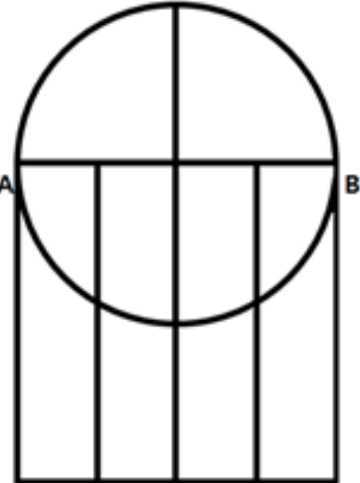
이 두개를 결합



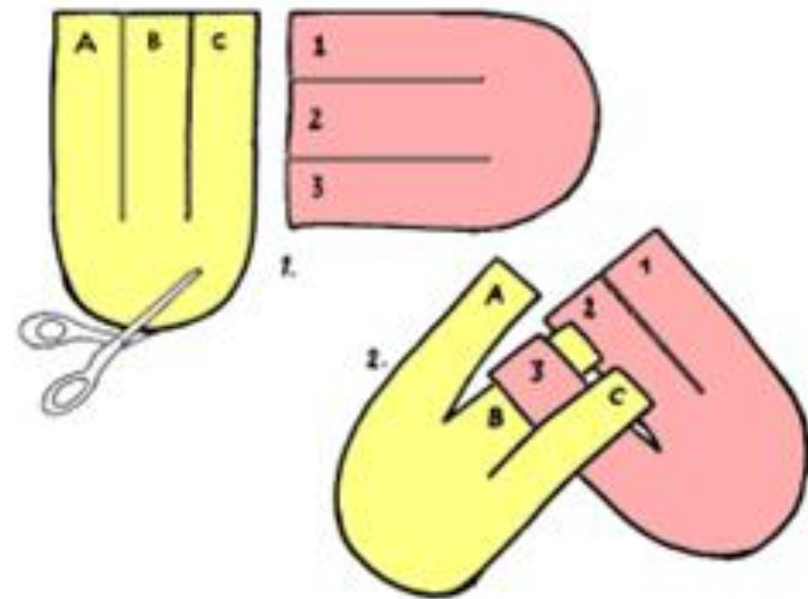
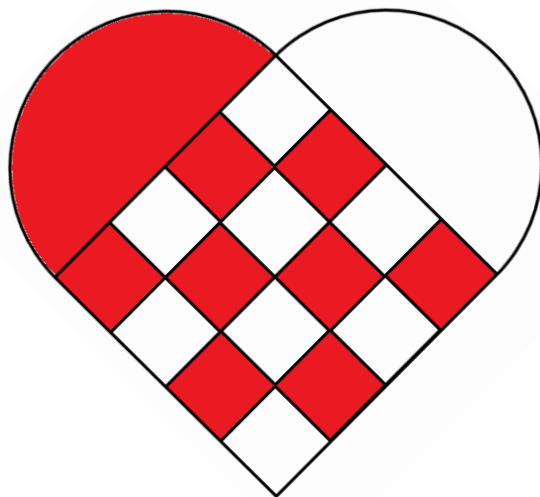
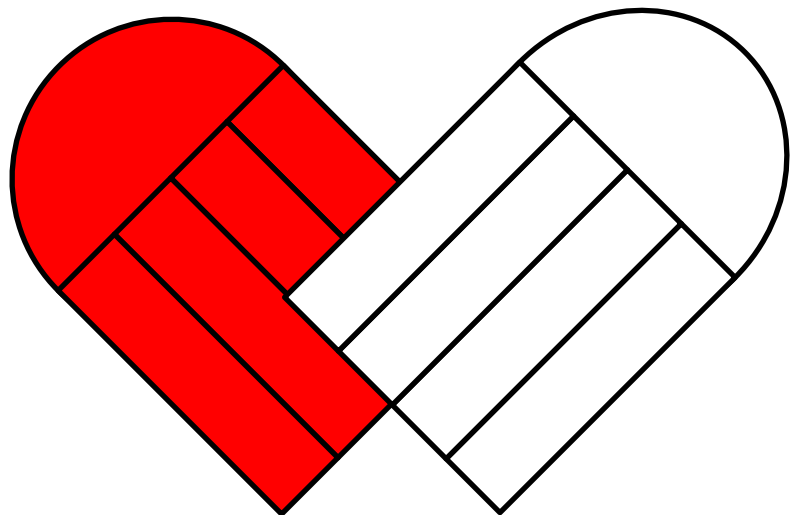


작가 안데르센, 크리스마스 장식 하트를 만들어내다!

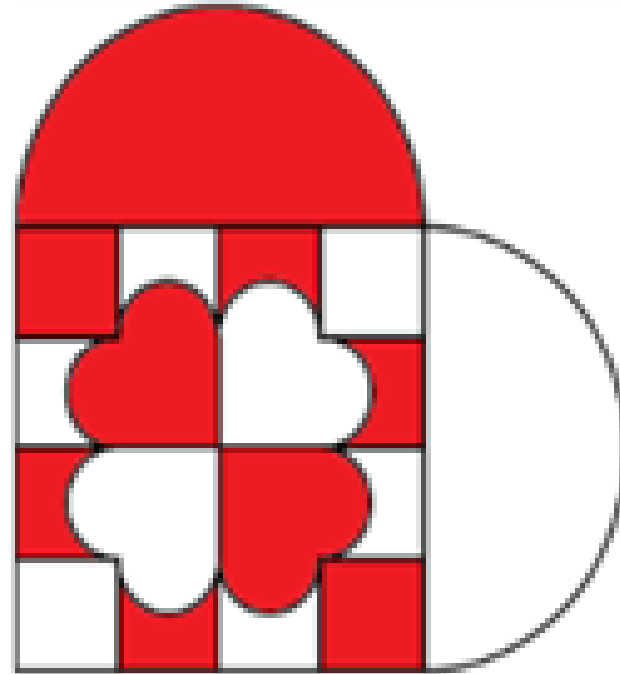
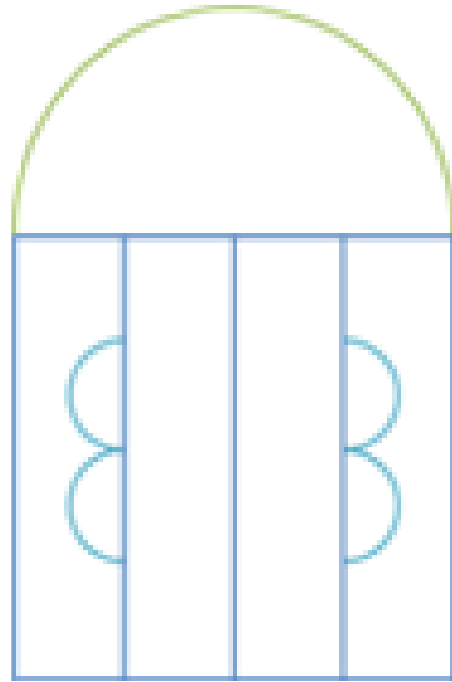
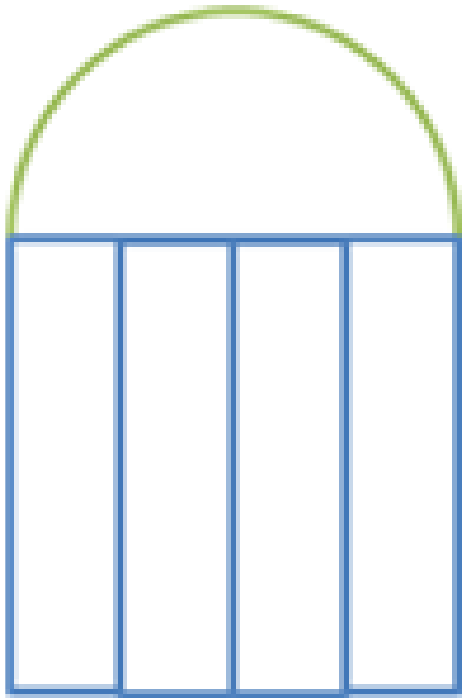


		
<p>1. 선분AB를 작도한다.</p>	<p>2. 선분AB를 이등분 한다.</p>	<p>3. 선분AB를 지름으로 한 원을 작도한다.</p>
		
<p>4. 선분AB를 지름으로 하는 정사각형을 작도한다.</p>	<p>5. 정사각형을 네 등분 한다.</p>	

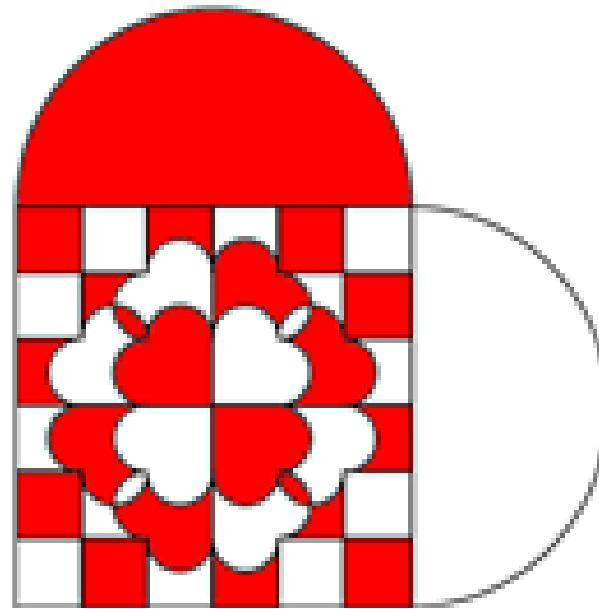
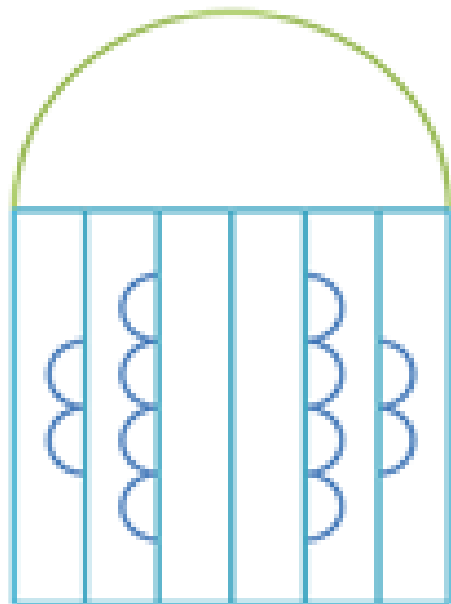
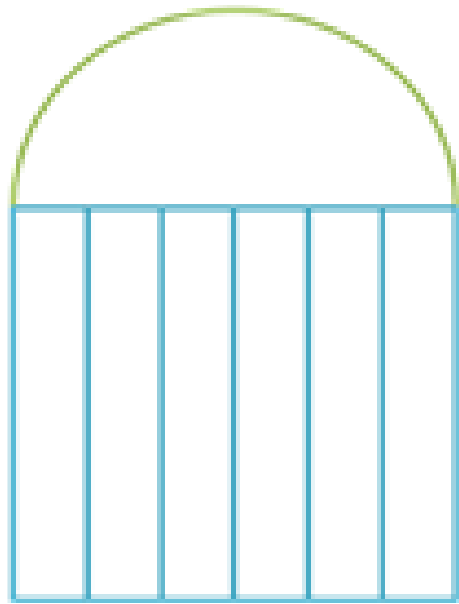
평면하트



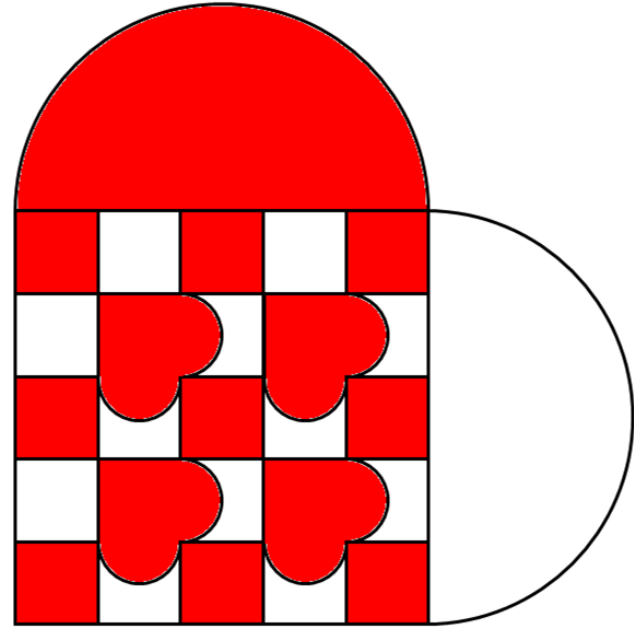
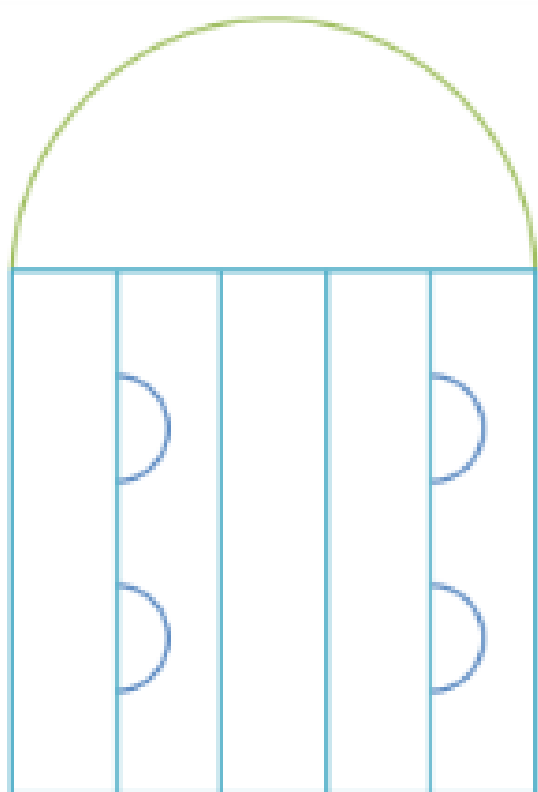
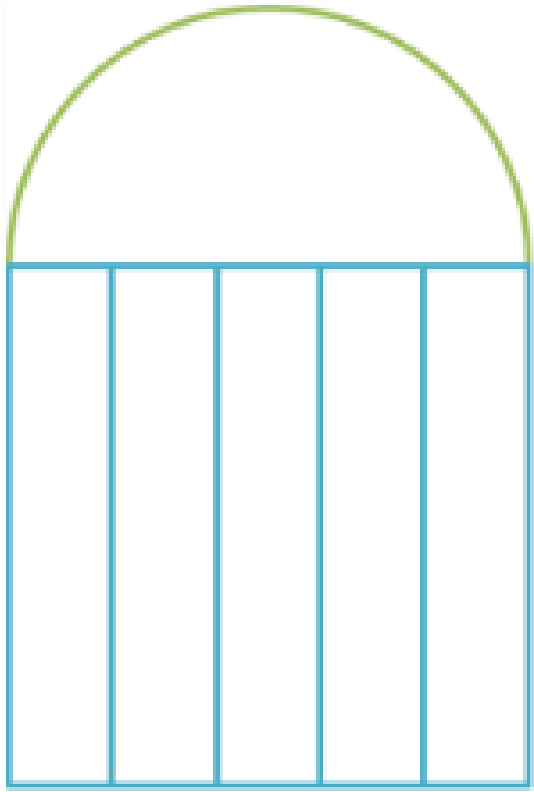
무늬를 디자인 하자!(반원 이용)



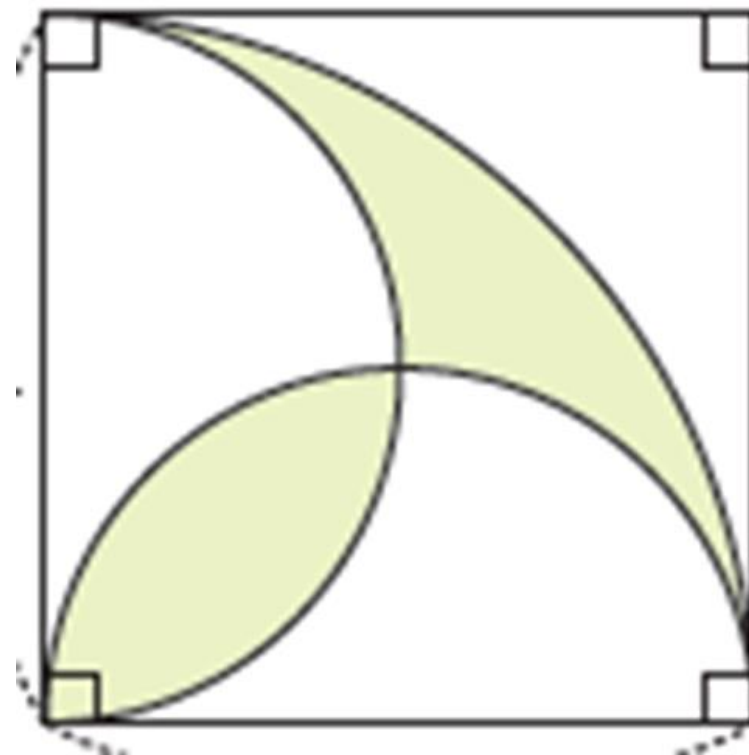
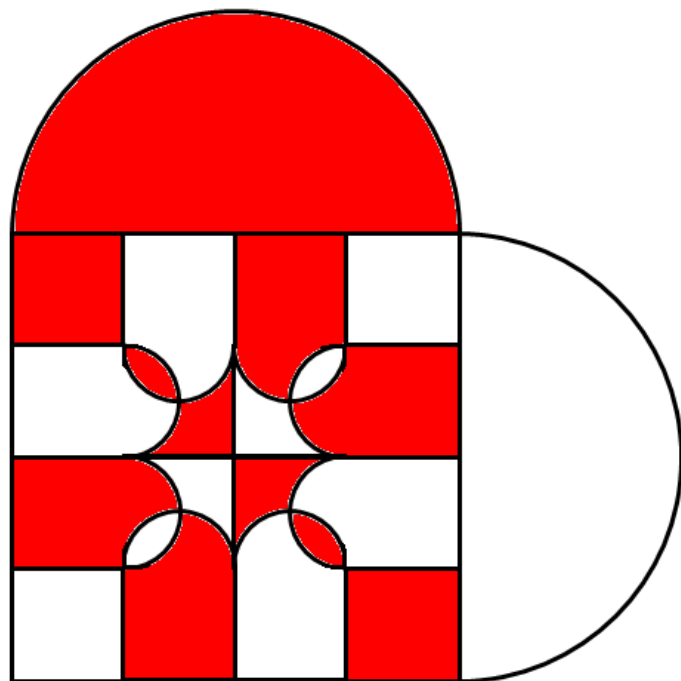
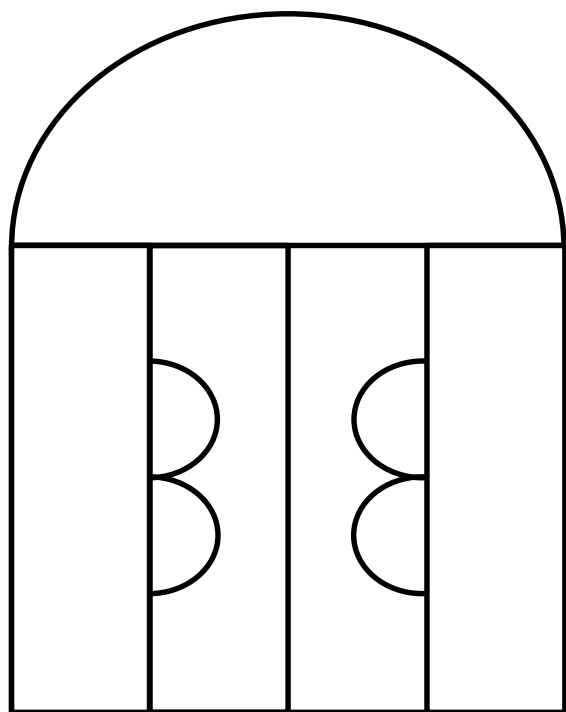
질문: 하트의 넓이는 안에 있는 작은 하트의 넓이의 몇 배 일까?

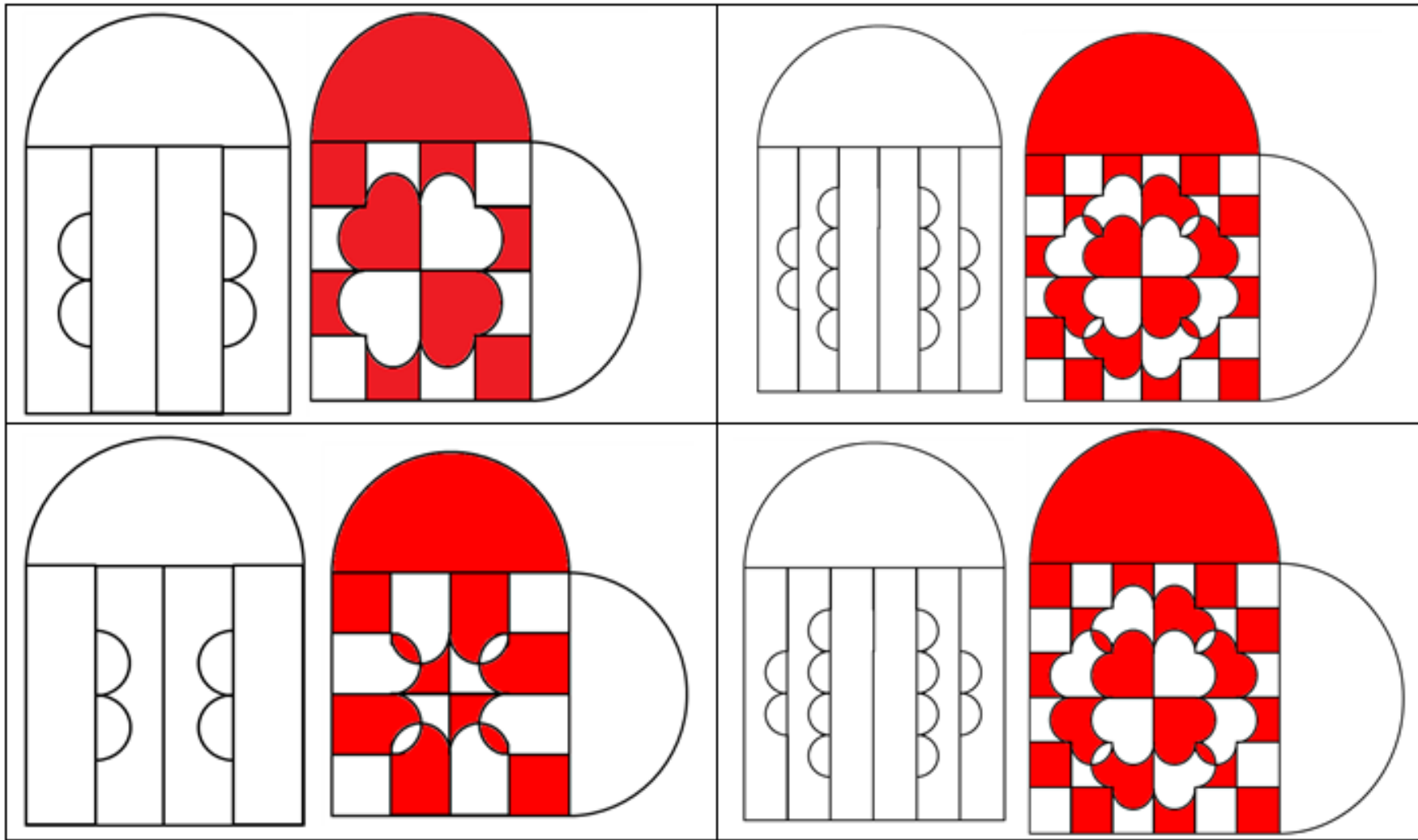


질문: 하트의 넓이는 안에 있는 작은 하트의 넓이의 몇 배 일까?



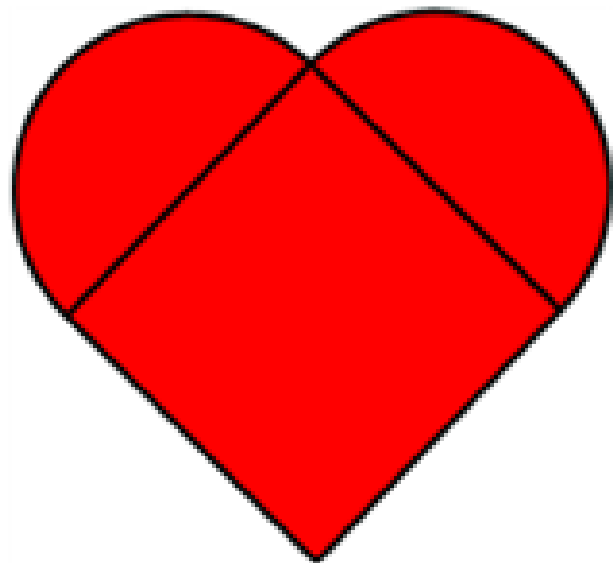
질문: 하트의 넓이는 안에 있는 작은 하트의 넓이의 몇 배 일까?



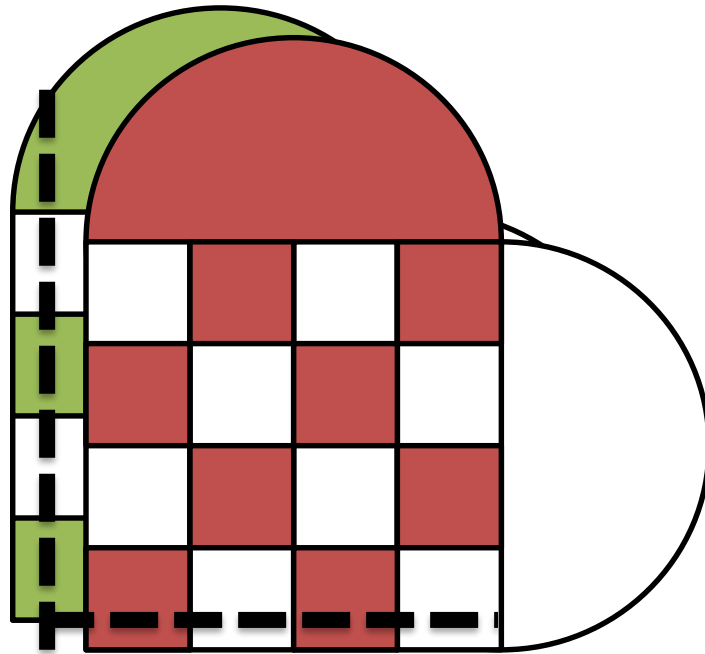


질문: 어떤 규칙(패턴)을 찾을 수 있을까?

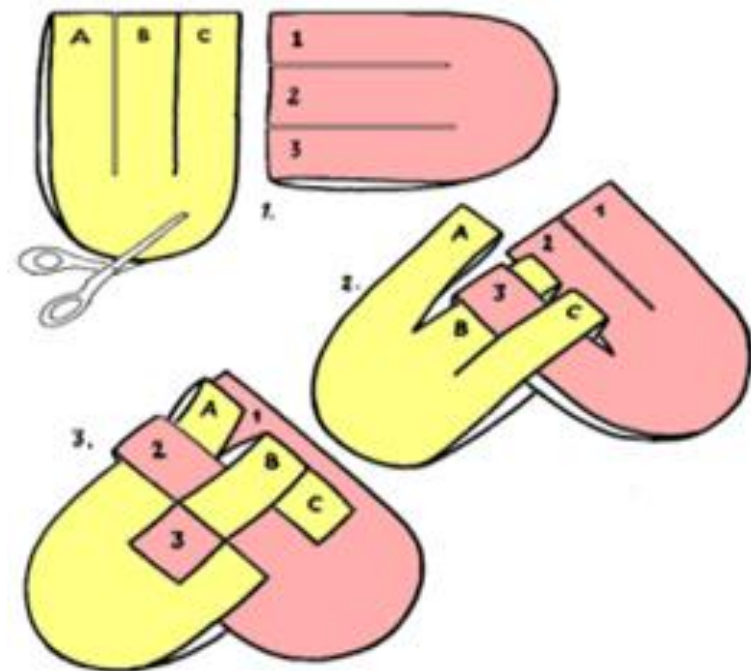
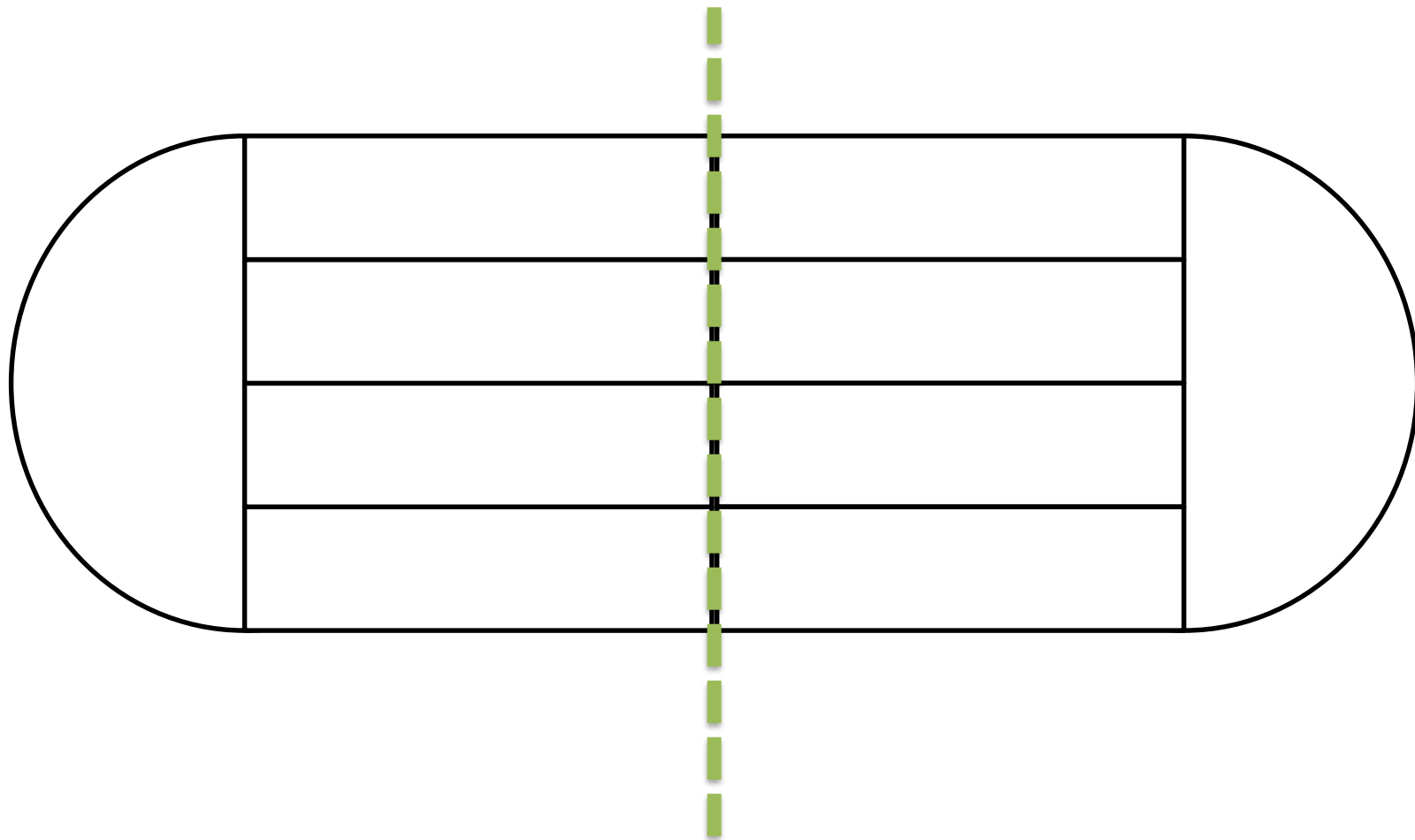
하트의 무게중심은 어떻게 찾을까?



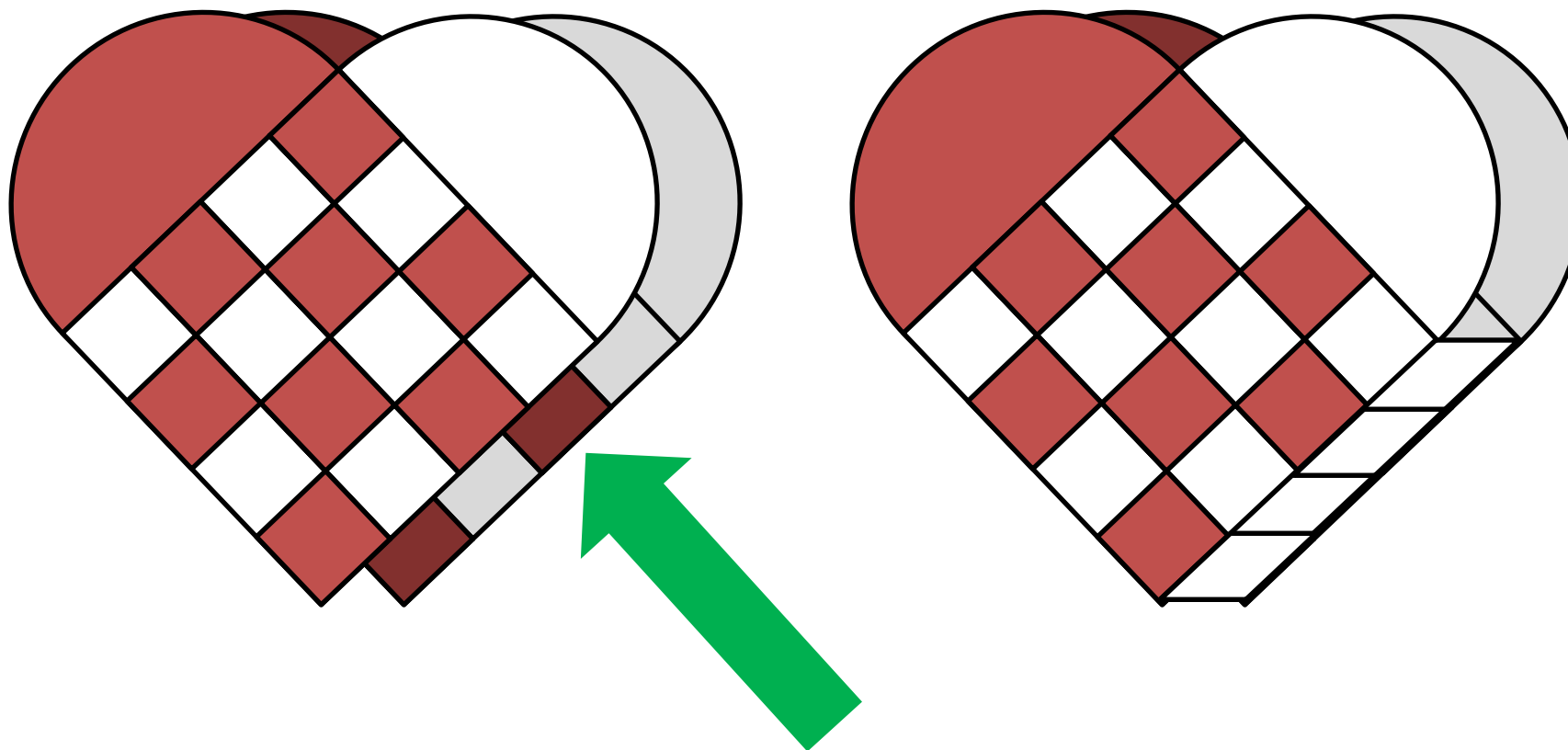
바구니하트는 어떻게 만들까?



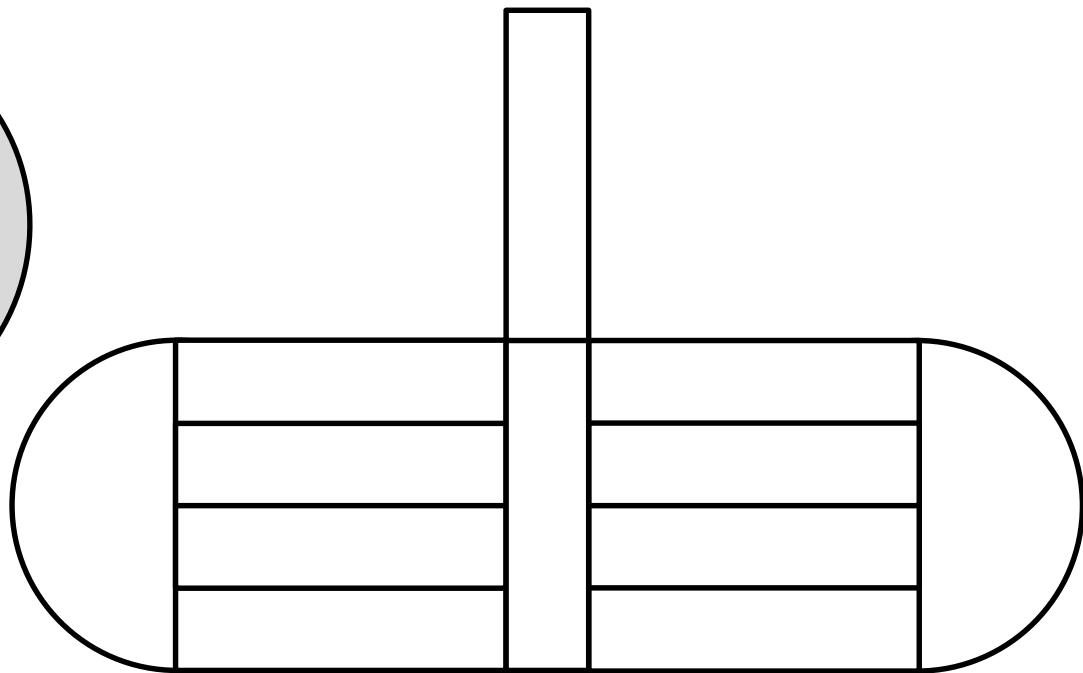
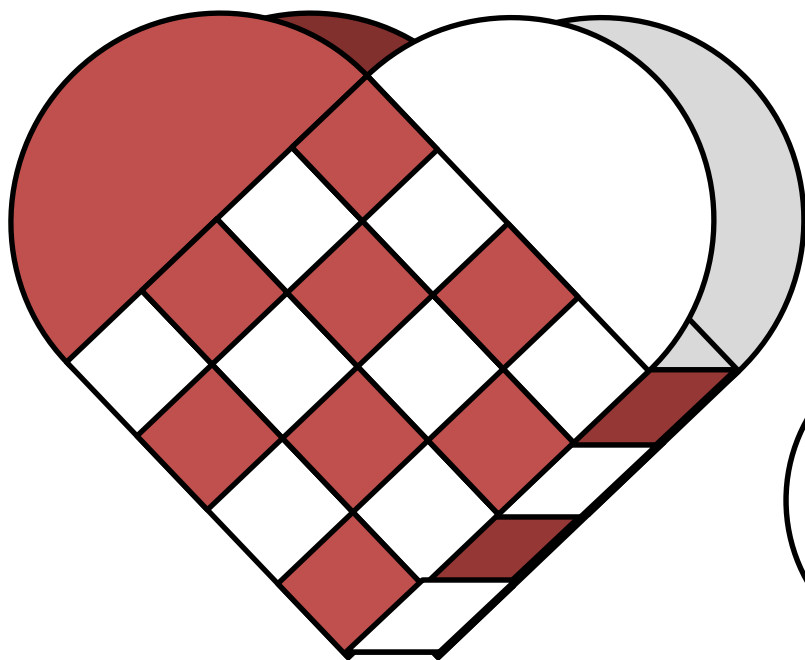
바구니하트는 어떻게 만들까?

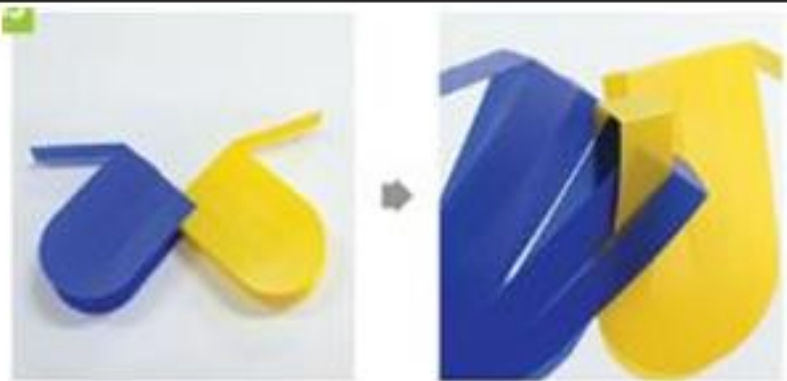
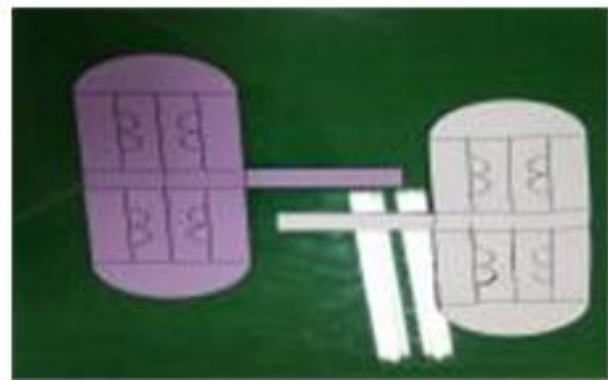


3차원하트는 어떻게 만들까?

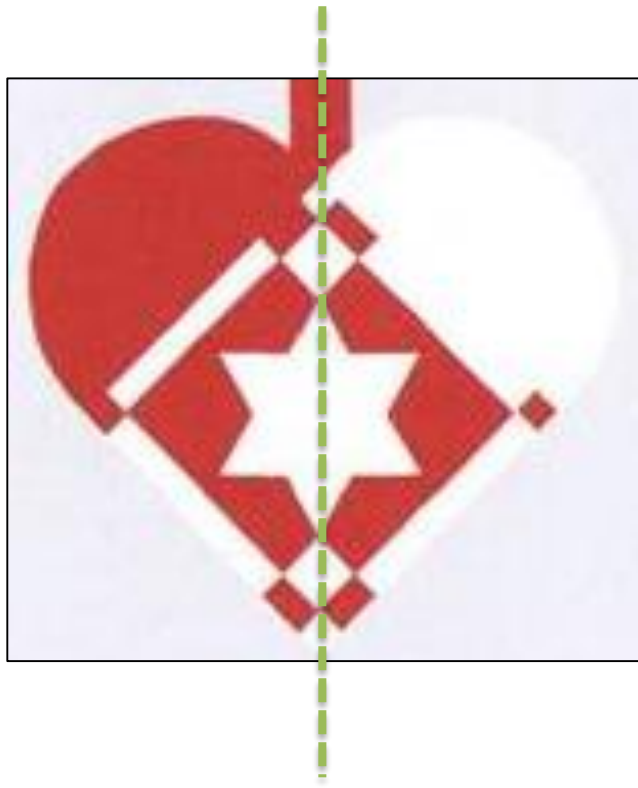


3차원 하트는 어떻게 만들까?

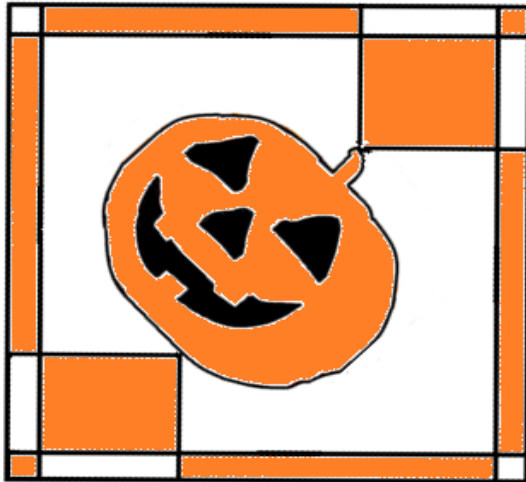


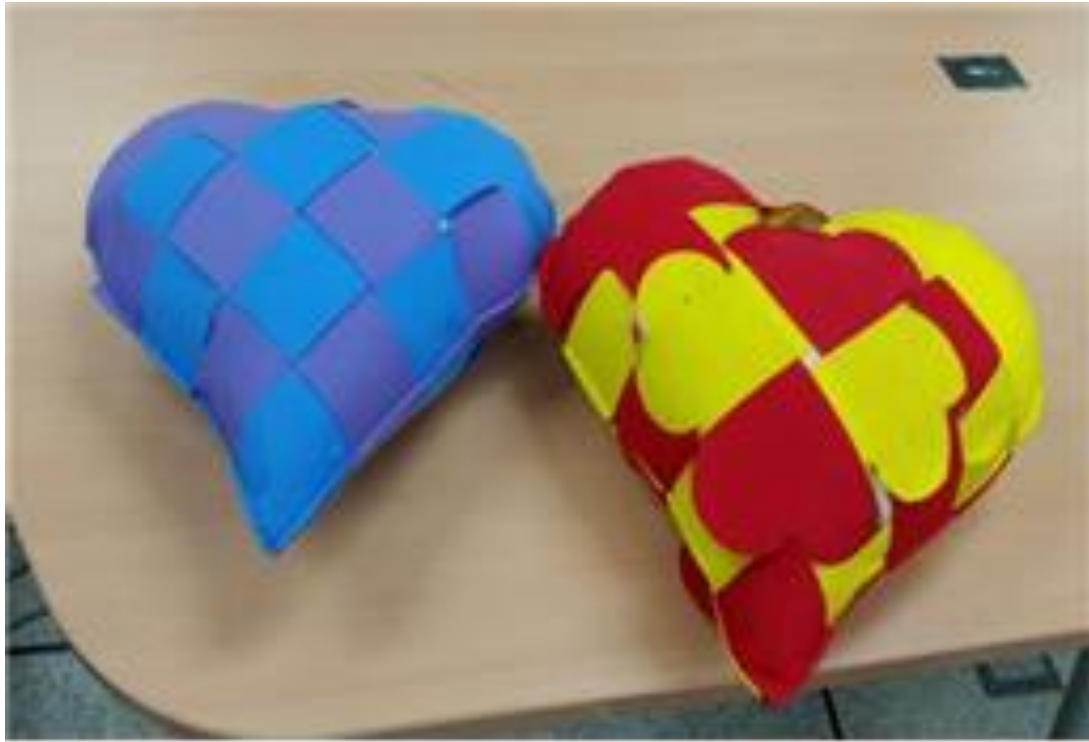


무늬를 디자인 하자!(대칭 이용)

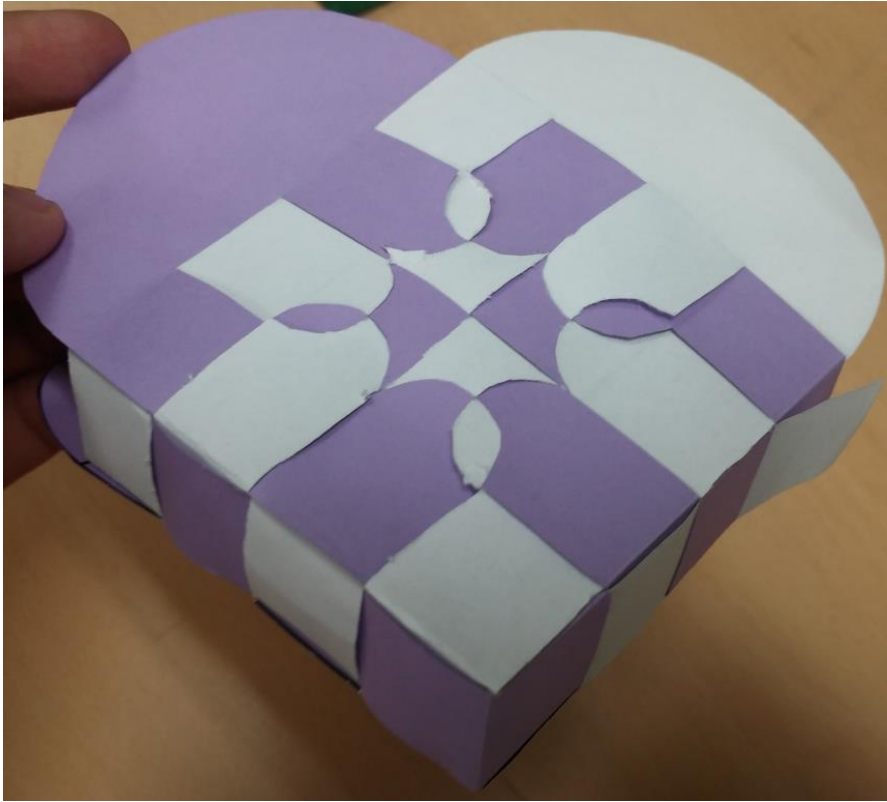


응용작품 제작

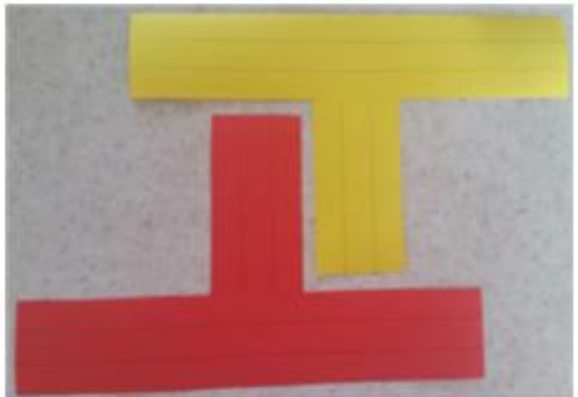





응용작품 제작



6). 사고의 확장Ⅱ : 4면의 정사각형이 합동인 3차원 하트를 바탕으로 6개의 면의 모양이 같은 정육면체를 만들 수 있지 않을까?

<p>◆ 양쪽 반원을 정사각형으로 변경하고 위로 정사각형 한 개를 더 추가함.</p>	<p>◆ 마지막 양쪽 날개를 연결하는 과정에서 같은 색깔로 연결하는 방법밖에는 없어 모든 면의 모양과 색깔이 같은 정육면체를 만들 수 없었음.</p>
	
<p>◆ 위쪽으로 한 칸을 더 추가하여 서로 다른 색이 얹힐 수 있도록 시도함.</p>	<p>◆ 엮은 하트에서 출발하여 정육면체까지 완성</p>
