Comprehension questions

**Problem 28.1.** *Draw a triangulation of this:*

![Triangulation of a square](image1.png)

**Problem 28.2.** *For every $n \geq 3$, find a set of $n$ points, not all lying on a line, which admits only one triangulation.*

**Problem 28.3.** *Here are two triangulations of the square $P = [-1,1] \times [-1,1]$, using all its integer points as vertices. Use those to give approximate values for $\int_P x^2 + y^2$, and compare that with the actual value.*

![Triangulations of a square](image2.png)

**Problem 28.4.** *Find a set of 5 points, no three of which lie on the same line, and such that every possible triangulations is Delaunay.*

**Problem 28.5.** *Here is a picture of the point set $(i, j)$ where $i, j \in \{0, \ldots, 10\}$ and at least one of the coordinates $i$ and $j$ lies in $\{0, 1, 9, 10\}$; together with a Delaunay triangulation.*

![Point set and Delaunay triangulation](image3.png)

*What is the shape complex at scale $\sigma = 3$? Just drawing it is enough.*