

**Exercise 1.** This is a very simple exercise. It doesn't have any sub-question. Is 57 prime?

**Exercise 2.** This exercise has multiple sub-questions.

**2.1** Give an explicit algebraic formula for  $\cos \frac{2\pi}{17}$ .

**2.2** Find a polynomial of which  $\cos \frac{\pi}{17}$  is a root.

These identities allowed Gauß to draw a *heptadecagon* (polygon with seventeen sides) from a ruler-and-compass construction.

**2.3** Can all polygons be thus obtained?