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Quadratics, continued fractions and divided cells. Preliminary report.

The usual algorithm for computing ideal classes and units in orders of quadratic number fields is identical in structure to the ordinary continued fraction, although it is usually described differently. In addition there is a formal process connecting the divided cell algorithm used in inhomogeneous problems with the ordinary continued fraction. This allows the natural methods of one of these settings to be applied in the other two. We describe some explicit computations using the rules of one of these settings, but applied to natural questions of another. (Received September 11, 2008)