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that  $f^2$  and  $g$  have the same leading term. One thereby obtains distinct  $K$ -reciprocal representations,  $1/h_1 + \dots = 1/f + \dots$ ; adding  $1/X$  to (the left of) each produces distinct such representations with the same initial term.

The two representations given by the above recipe may, however, have unequal lengths. Consider, for instance, the choices  $f = X^2 + 1$ ,  $h_1 = X^2 - 1$ ,  $r = X$ . The recipe produces

$$\begin{aligned} \frac{X^4 + X^3 + 2X - 1}{X^5 + X^2 - X} &= \frac{1}{X} + \frac{1}{X^2 - 1} + \frac{1}{-X^5 + X^3 - X^2 + X + 1} + \frac{1}{p_{11}} \\ &= \frac{1}{X} + \frac{1}{X^2 + 1} + \text{sum of three additional terms.} \end{aligned} \tag{4}$$

Let  $w$  denote the rational function in (4), we compute via the first equation in (4) that

$$\begin{aligned} v = 1/X + w/X &= \frac{X^5 + X^4 + X^3 + X^2 + X - 1}{X^6 + X^3 - X^2} \\ &= \frac{1}{X} + \frac{1}{X^2} + \frac{1}{X^3 - X} + \frac{1}{-X^6 + X^4 - X^3 + X^2 + X} + \frac{1}{p_{12}}, \end{aligned}$$

which explains the origin of the first equation in (3). How does one obtain the second equation in (3)? Simply apply the Theorem's algorithm to  $w$ , multiply the result through termwise by  $1/X$ , and then add  $1/X$  to (the left of) the ensuing expression. Finally, it is amusing to note that an application of the Theorem's algorithm directly to  $v$  produces yet another distinct  $\mathbf{Q}$ -reciprocal representation of  $v$ .

David E. Dobbs and Robert M. McConnel  
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REFERENCES

- 1 W.J. LeVeque: Fundamentals of number theory. Addison-Wesley, Reading 1977.
- 2 I. Niven and H.S. Zuckerman: An introduction to the theory of numbers, 3rd ed. Wiley, New York 1972.

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**Berichtigung**

**Correction to paper: Packing of 180 equal circles on a sphere.  
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Professor H.S.M. Coxeter kindly drew my attention to the fact that figures of packings of 72 and 180 circles are chiral and not centro-symmetric. Namely, central symmetry can occur in tessellation  $\{3, q + \}_{b,c}$  ( $q = 4$  or  $5$ ) if  $bc(b - c) = 0$ , that is, the tessellation has a plane of symmetry. Thus, the statement in the last sentence of the paper is not valid.

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