

If  $n > 4$ , the task of finding the nodes is more laborious, but we can find an equation of degree  $\frac{1}{2}(n-1)(n-2)$  for  $u$  (or  $v$ ) as the abscissa of a point common to  $\Delta = 0, \Delta_1 = 0, \dots, \Delta_{n-2} = 0$  by routine processes of elimination. As a simple illustration we may take the quintic

$$x : y : z = 1 : (t + t^4) : t^5,$$

for which the equations  $\Delta = 0$ , etc. are

$$u^3 - 2uv + 1 = 0, \quad u^2v - v^2 + u = 0,$$

$$uv^2 + u^2 - v = 0, \quad u^3 + v^3 - 2uv = 0.$$

These four equations have in common the six solutions of

$$u^6 + 4u^3 - 1 = 0, \quad 2uv = u^3 + 1,$$

whence

$$u = -\frac{1}{2}(1 \pm \sqrt{5}), \quad v = 1; \quad u = -\frac{1}{2}(1 \pm \sqrt{5})\omega, \quad v = \omega^2;$$

$$u = -\frac{1}{2}(1 \pm \sqrt{5})\omega^2, \quad v = \omega,$$

where  $\omega^2 + \omega + 1 = 0$ . The corresponding nodes of the quintic are

$$(2, \alpha + \alpha^4 + \beta + \beta^4, \alpha^5 + \beta^5),$$

or

$$(2, u^4 - 4u^2v + 2v^2 + u, u^5 - 5u^3v + 5uv^2);$$

that is

$$\{2, (\mp\sqrt{5} - 1), 2\}, \quad \{2, (\mp\sqrt{5} - 1)\omega, 2\omega^2\}, \quad \{2, (\mp\sqrt{5} - 1)\omega^2, 2\omega\}.$$

H. S.

### CORRESPONDENCE.

“ ISOSCELES.”

To the Editor of the *Mathematical Gazette*.

SIR,—Mr. Williamson’s spells may bind his boys, but is it not a pity to divorce mathematics entirely from the still somewhat cultural classics?

I suggest that the boy who can be spell-bound by *SOS* and *ELE* can be taught to spell by correlating the *iso* of *isosceles* with the several “*iso*”-s he comes across in his geography, and that he can as readily realise that *sceles* is the basic part of *skele-ton*. In this way an interest may (perhaps) be directed to Greek, which provides him with most of his geographical and other *iso* tags. If on his first introduction to *isosceles*, it be (mis-) pronounced “*iso-skeles*”, his orthography may be helped, and he will later be able to adopt the more orthodox pronunciation and (again perhaps) remember the spelling, with an unconscious widening of his non-mathematical knowledge.

I have used “*bind*” in the sense in which Mr. Williamson does, not with the connotation of R.A.F. slang! Yours, etc., I. FITZROY JONES.

### COMPLEX NUMBER PHRASEOLOGY.

To the Editor of the *Mathematical Gazette*.

SIR,—The use of the words “*real*” and “*unreal*” in connection with numbers has long been felt to be unsatisfactory, particularly by such leading textbook writers as Mr. C. V. Durell. And yet the former word is a most natural word at the stage when it is usually first needed, in the theory of quadratics; this is particularly apparent in the graphical treatment of the subject.

Could the later objections be overcome by using the word *irreal* or *super-real*? Or would lovers of the English language object?

Yours, etc., T. G. C. WARD.