

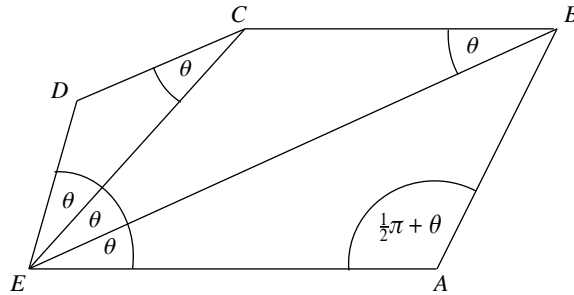
Student Problems

Students up to the age of 19 are invited to send solutions to either or both of the following problems to Stan Dolan, 126A Harpenden Road, St Albans, Herts., AL3 6BZ.

Two prizes will be awarded – a first prize of £25, and a second prize of £20 – to the senders of the most impressive solutions for either problem. It is, therefore, not necessary to submit solutions to both. Solutions should arrive by May 20th 2018. Please give your School year, the name and address of your School or College, and the name of a teacher through whom the award will be made. Please print your own name clearly! The names of all successful solvers will be published in the July 2018 edition.

Problem 2018.1 (Stan Dolan)

The diagram shows some of the angles in pentagon $ABCDE$.



Find, in terms of θ , the angle between lines AD and BE .

Problem 2018.2 (Geoff Strickland)

- Find three rational numbers such that their sum is 6, the sum of their squares is $\frac{25}{2}$ and the sum of their cubes is 27.
- Is your solution unique?