a) Write the decimal equivalent to 1/17 and 1/19 to at least 22 places.

b) What is the Repeat Black and the SDQ(RB) for each?

c) What relationship, if any, do you notice between the RB and the denominator for each?

d) What is the significance of the denominators that we have used 1/7, 1/11, 1/13, 1/17, and 1/19?

e) What does each have in common? Is there a pattern here?

(SDQ = single digit quality; for a review see December’s problem #195 available on our website.)

Figure ABCDEFG is a regular heptagon. What is the ratio of angles AEG, EGA and GAE to one another?

What is the ratio of sides e, a and g to one another?