

(Continued from p. 316.)

SOLUTIONS TO PROBLEMS

1. 11.2556550
2. The roots are 3, and

$$\frac{-3 \pm \sqrt{5}}{2} .$$

Limiting ratio is 3.

3. The roots are -2, -2, r and s. Limiting ratio is -2.
4. The roots of the combined recursion relation will be 1, r, s. Limiting ratio is r.
5. The roots of the combined recursion relation are +2, +2, +2,

$$\frac{3 \pm \sqrt{13}}{2} .$$

The limiting ratio is

$$\frac{3 + \sqrt{13}}{2} = 3.3027756 .$$

6. The roots of the auxiliary equation are 2,

$$\frac{1 \pm \sqrt{19} i}{2} .$$

The absolute value of the complex roots is greater than 2. Thus the sequences will not have a limiting ratio.

