Find the missing terms in each sequence.

Arithmetic Seq: 13, 27, 41, 55, 69, 83

$d = \frac{83-13}{5} = \frac{70}{5} = 14$

START AT 13 the keep adding 14

Geometric Seq: 8, 32, 128, 512, 2048, 8192

$r = \sqrt[5]{\frac{8192}{8}} = \sqrt[5]{1024} = 4$

START AT 8 and keep multiplying by 4

Find the 20th term of the following sequence.

$\frac{3}{4}, \frac{8}{9}, \frac{15}{16}, \frac{24}{25}, \frac{35}{36}, \ldots$

numerators are one less than denominators

denominators are perfect squares

$a_n = \frac{(n+1)^2 - 1}{(n+1)^2}$

$a_{20} = \frac{21^2 - 1}{21^2} = \frac{440}{441}$