16b)

$\frac{1}{7} = 0.\dot{1}42857\dot{}$

$\frac{2}{7} = 0.\dot{2}85714\dot{}$

$\frac{3}{7} = 0.\dot{4}28571\dot{}$

$\frac{4}{7} = 0.\dot{5}7142\dot{8}$

$\frac{5}{7} = 0.\dot{7}1428\dot{5}$

$\frac{6}{7} = 0.\dot{8}5714\dot{2}$

19c)

relatively prime if HCF = 1

$\phi(n)$ = # of integers $\leq n$ that are relatively prime to n.

Prove $\phi(3^n) = 2 \times 3^{n-1}$

$\phi(p^k) = p^k - p^{k-1}$

$\phi(3^n) = 3^n - 3^{n-1}$

$= 3^{n-1}(3-1)$

$= 3^{n-1} \times 2$