

P. 27

14. D^2 has 3 fixed points

$$0, \frac{1}{3}, \frac{2}{3}$$

D^3 has 7 fixed points

$$0, \frac{1}{7}, \frac{2}{7}, \frac{3}{7}, \frac{4}{7}, \frac{5}{7}, \frac{6}{7}$$

D^4 has $2^4 - 1$ fixed points

D^5 has $2^5 - 1$ fixed points

D^n has $2^n - 1$ fixed points

15. $T(x) = \begin{cases} 2x & 0 \leq x \leq \frac{1}{2} \\ 2-2x & \frac{1}{2} < x \leq 1 \end{cases}$

16.

$$T^2(x) = \begin{cases} 4x & 0 \leq x \leq \frac{1}{4} \\ 2-4x & \frac{1}{4} \leq x \leq \frac{1}{2} \\ 4x-2 & \frac{1}{2} \leq x \leq \frac{3}{4} \\ 4-4x & \frac{3}{4} \leq x \leq 1 \end{cases}$$

