

$$3.0) \quad f(x) = x$$

$$F(x) = x(1-x) \Rightarrow x(1-x) = xc$$

$$x - x^2 = xc \Rightarrow x - xc - x^2 = 0$$

$$-x^2 = 0$$

$$\boxed{x = 0}$$

fixes $f = \{0\}$

$$8) \quad f(x) = 3xc(1-x)$$

$$3xc(1-x) = x \Rightarrow 3x - 3x^2 = xc$$

$$3xc - 3x^2 - xc = 0$$

$$2xc - 3x^2 = 0 \quad : xc$$

$$xc(2 - 3x) = 0$$

$$\text{so } \boxed{x=0} \text{ or } 2 - 3x = 0 \quad \Rightarrow \quad 2 - 3x = 0 \Rightarrow 2 = 3x$$

$$\boxed{x = \frac{2}{3}}$$

$$\text{fixes } f = \{0, \frac{2}{3}\}$$