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$$(a) f(x+3) = \frac{1}{2 \cdot (x+3)} = \boxed{\frac{1}{2x+6}}$$

$$(b) f(-7) = \frac{1}{2 \cdot (-7)} = \boxed{-\frac{1}{14}}$$

$$(c) f(x+h) = \frac{1}{2(x+h)}$$

$$\text{Hence, } \frac{f(x+h) - f(x)}{h} = \frac{\frac{1}{2(x+h)} - \frac{1}{2x}}{h} =$$

$$\text{LCD} = 2x(x+h) \left\{ \begin{aligned} &= \frac{\frac{1 \cdot x}{2(x+h) \cdot x} - \frac{1 \cdot (x+h)}{2x(x+h)}}{h} = \frac{\frac{x}{2x(x+h)} - \frac{x+h}{2x(x+h)}}{h} = \end{aligned} \right.$$

$$x - (x+h) = x - x - h = -h$$

∴

$$= \frac{\frac{-h}{2x(x+h)}}{h} = \frac{-h}{2x(x+h)} \cdot \frac{1}{h} = \boxed{-\frac{1}{2x(x+h)}}$$

Change <sup>to</sup> multiplication to flip the denominator