

KEY

Algebraic Simplification Exercise

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$$\text{For } x \neq 6, \quad \frac{(x-5)(x-6)}{x-6}$$

$$= \left(\frac{(x-6)}{(x-6)} \right) (x-5)$$

$$= 1 \cdot (x-5) = x-5.$$

Therefore, for $x=12$,

$$f(x) = f(12) = 12-5 = 7.$$

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