

$$D_g \cap D_f - \left(\frac{1}{f(x)} \right) = \left\{ \left(2, -\frac{1}{4} \right) (0, 4) \right\}$$

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$$x=2 \rightarrow f(2) = -4$$

$$x=1 \rightarrow f(1) = 0 \bar{0} \bar{0}$$

$$x=3 \rightarrow f(3) = 0 \bar{0} \bar{0}$$

$$x=0 \rightarrow f(0) = \frac{1}{4}$$

$$\text{الف) } 2x=1 \rightarrow x=\frac{1}{2}$$

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

$$2x=4 \rightarrow x=2$$

$$2x=-1 \rightarrow x=-\frac{1}{2}$$

$$\Rightarrow f(x) = \left\{ \left(\frac{1}{2}, 2 \right) \left(\frac{3}{2}, -1 \right) (2, 2) \left(-\frac{1}{2}, 4 \right) \right\}$$

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$$\text{ب) } x^2=1 \rightarrow x=\pm 1$$

$$x^2=3 \rightarrow x=\pm\sqrt{3} \Rightarrow f(x) = \left\{ (1, 2) (\pm\sqrt{3}, -1) (\pm 2, 2) \right\}$$

$$x^2=4 \rightarrow x=\pm 2$$

$$x^2=-1 \rightarrow \text{غير موجود}$$

$$\text{ج) } 2g^2(x)+1 = \left\{ (-2, 9) (1, 3) (3, 9) (-1, 1) \right\}$$

$$\text{د) } \frac{2f}{9} = \left\{ (1, -4) (3, -1) \right\}$$