

**EJERCICIOS**

1. Relaciona cada función con su respectivo dominio de definición:

$$1) y = \frac{1}{x^2 + 1}$$

$$1. \mathbb{R}$$

$$2) y = \frac{2+x}{x^2}$$

$$2. \mathbb{R} - \{-2\}$$

$$3) y = \sqrt{x-2}$$

$$3. \mathbb{R} - \{3\}$$

$$4) y = \frac{1}{3x - x^2}$$

$$4. [-1, +\infty)$$

$$5) y = \frac{2x}{(x-3)^2}$$

$$5. [-3, +\infty)$$

$$6) y = \frac{1}{\sqrt{x-2}}$$

$$6. \mathbb{R} - \{-3, +3\}$$

$$7) y = \sqrt{x^2 - 1}$$

$$7. \mathbb{R} - \{0, 3\}$$

$$8) y = \frac{1}{x^2 - 9}$$

$$8. \mathbb{R}$$

$$9) y = \sqrt{3x-1}$$

$$9. [2, +\infty)$$

$$10) y = \frac{1}{x+2}$$

$$10. \left[ \frac{1}{3}, +\infty \right)$$

$$11) y = \sqrt{x+1}$$

$$11. (2, +\infty)$$

$$12) y = \sqrt{x+3}$$

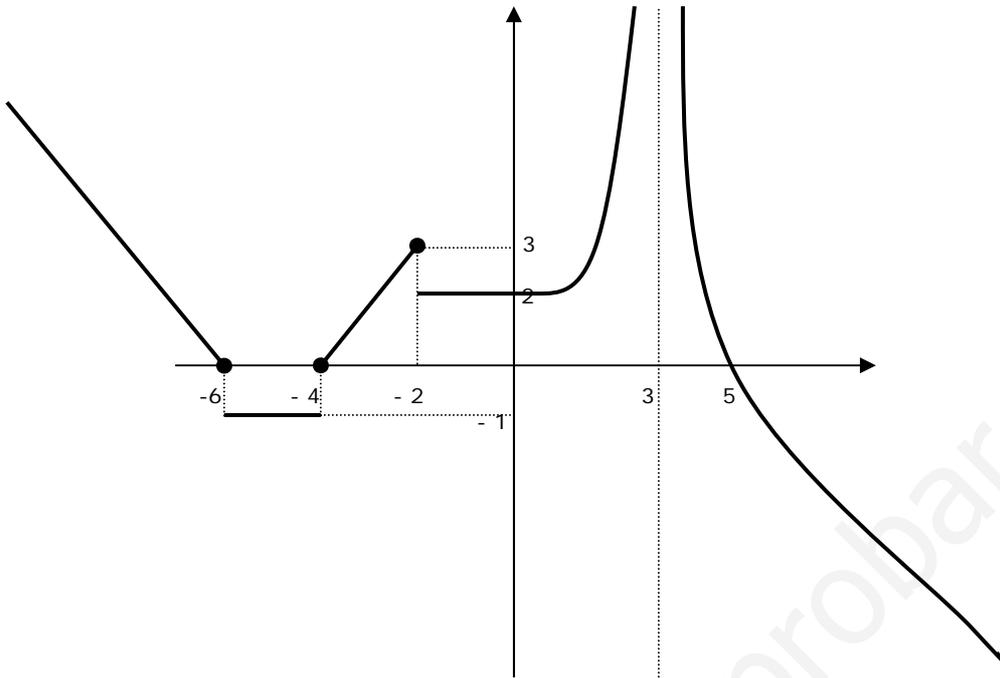
$$12. \mathbb{R} - \{0\}$$

2. Relaciona cada dominio de definición con su respectiva función:

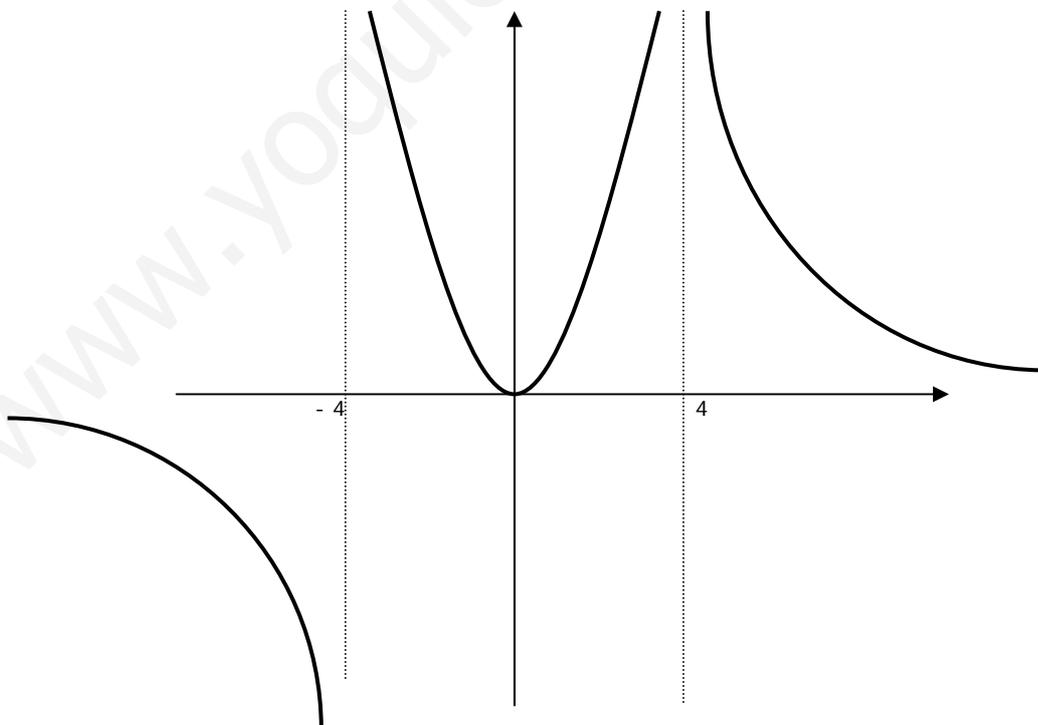
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|--|---|
| 1) $(2, +\infty)$                                  | 1. $y = \frac{\sqrt{x^2 - x - 2}}{x + 9}$ |
| 2) $R - \{-7\}$                                    | 2. $y = \frac{3\sqrt{x}}{x - 8}$          |
| 3) $(-\infty, -1) \cup (-1, +\infty)$              | 3. $y = \frac{1}{\sqrt{x - 2}}$           |
| 4) $R - \{-2, 2\}$                                 | 4. $y = \frac{1}{x^2 - 16}$               |
| 5) $(-\infty, 0) \cup (0, +\infty)$                | 5. $y = \sqrt{3x - 4}$                    |
| 6) $[0, 8) \cup (8, +\infty)$                      | 6. $y = 3^{\frac{1}{x}}$                  |
| 7) $(0, +\infty)$                                  | 7. $y = \frac{3}{x + 7}$                  |
| 8) $(-\infty, -9) \cup (-9, -1] \cup [2, +\infty)$ | 8. $y = \sqrt{2x^2 + 4}$                  |
| 9) $\left[\frac{4}{3}, +\infty\right)$             | 9. $y = \log(x + 3)$                      |
| 10) $(-3, +\infty)$                                | 10. $y = \frac{2x}{\log_2 x}$             |
| 11) $[5, +\infty)$                                 | 11. $y = \sqrt{x} + \sqrt{x - 5}$         |
| 12) $R$  | 12. $y = \frac{2x - 4}{x + 1}$            |

3. Analiza las siguientes funciones:

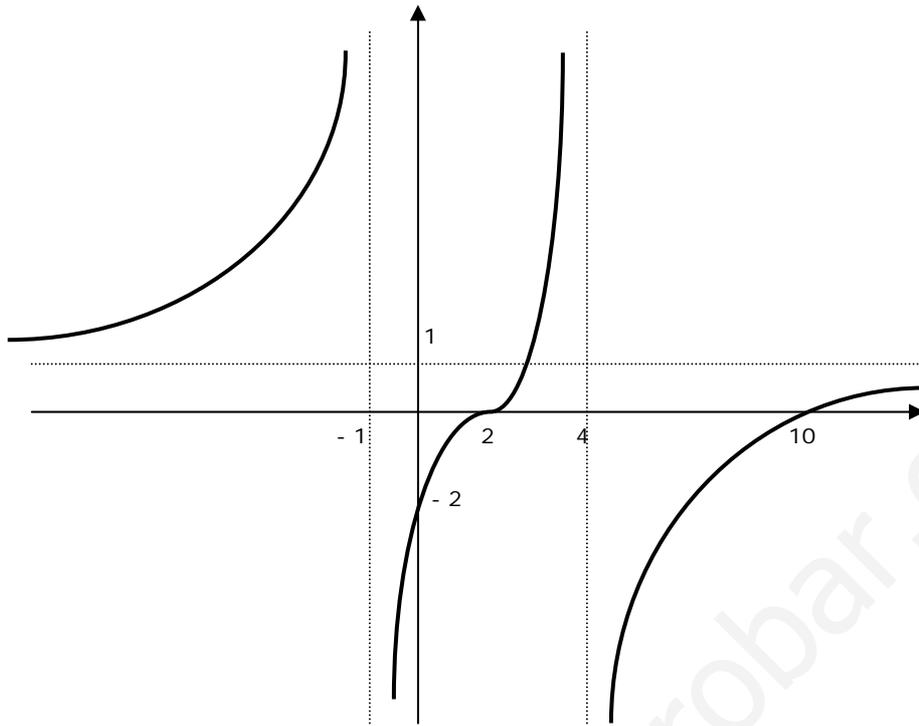
a)



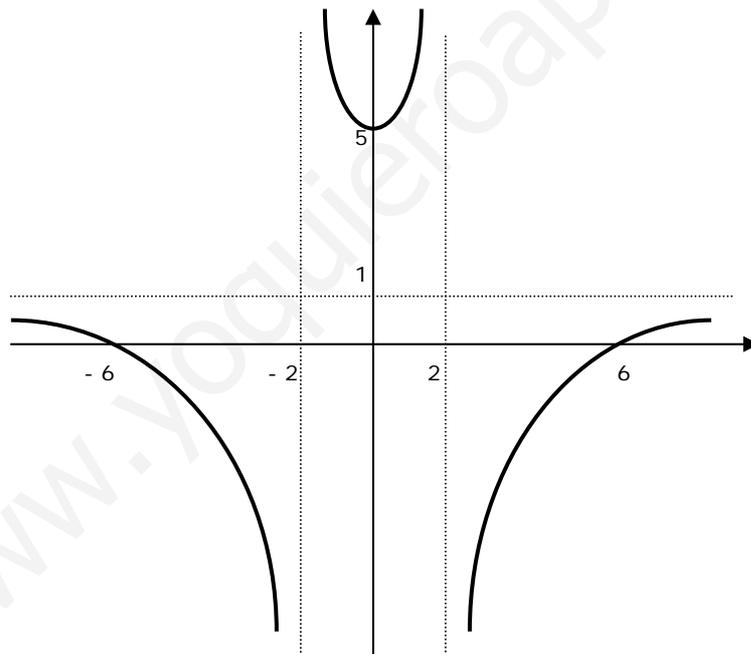
b)



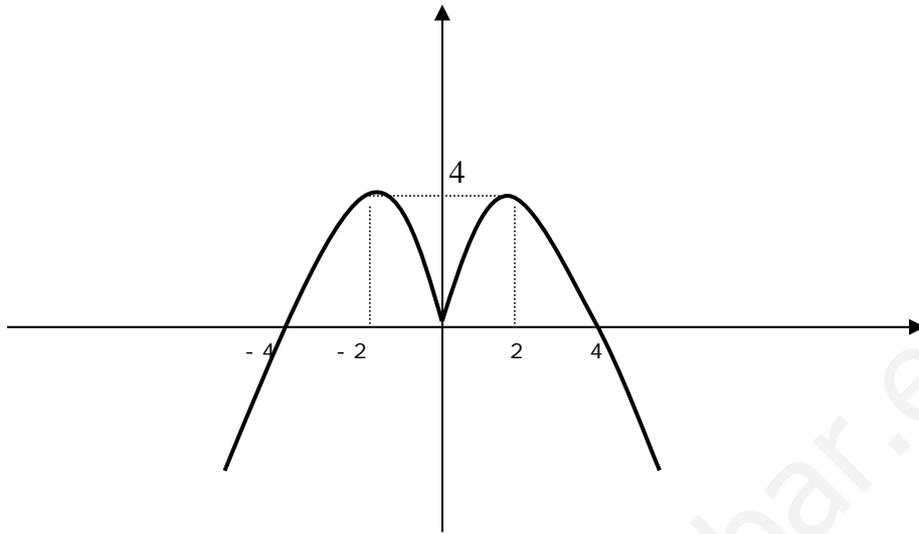
c)



d)



e)



f)

