

1. What is the domain of the function:

$$f(x) = \frac{3}{\sqrt{x-1}}$$

$$\sqrt{x-1} > 0$$

$$x-1 > 0$$

$$x > 1$$

(1)  $\{x|x \geq 1\}$

(2)  $\{x|x \neq 1\}$

(3)  $\{x|x > 1\}$

(4)  $\{x|x < 1\}$

2. A function is defined by the equation
- $y = 8x - 3$
- . If the domain is
- $2 \leq x \leq 4$
- , find the minimum value in the range of the function.

x	8x - 3	y
2	16 - 3	13
3	24 - 3	21
4	32 - 3	29

(13)

3. What is the domain of
- $f(x) = \sqrt{x-4}$
- over the set of real numbers?

(1)  $\{x|x > 4\}$

(2)  $\{x|x = 4\}$

(3)  $\{x|x \leq 4\}$

(4)  $\{x|x \geq 4\}$

4. What is the domain of the following function?

$$f(x) = \frac{3x^2}{x^2 - 49}$$

(1)  $\{x|x \in \text{real numbers}, x \neq \pm 7\}$

(2)  $\{x|x \in \text{real numbers}\}$

(3)  $\{x|x \in \text{real numbers}, x \neq 7\}$

(4)  $\{x|x \in \text{real numbers}, x \neq 0\}$

$$x^2 - 49 = 0$$

$$(x-7)(x+7) = 0 \quad (7, -7)$$

5. The inverse function of
- $\{(2,6), (-3,4), (7,-5)\}$
- is

(1)  $\{(-2,6), (3,4), (-7,-5)\}$

(2)  $\{(-6,-2), (-4,3), (5,-7)\}$

(3)  $\{(2,-6), (-3,-4), (7,5)\}$

(4)  $\{(6,2), (4,-3), (-5,7)\}$

inverse switch y with x

$$y = x \quad x = y$$

6. The inverse of the function
- $2x + 3y = 6$
- is

(1)  $y = \frac{2}{3}x + 3$

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

(3)  $y = \frac{3}{2}x + 2$

(4)  $y = -\frac{3}{2}x + 2$

$$2y + 3x = 6$$

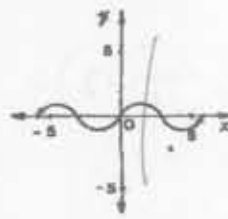
$$2y - 3x = 6 - 3x$$

$$\frac{2y}{2} = \frac{6 - 3x}{2} = -\frac{3}{2}x + 3$$

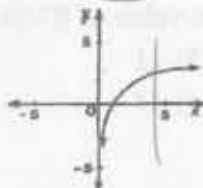
7. Which graph does not represent a function?



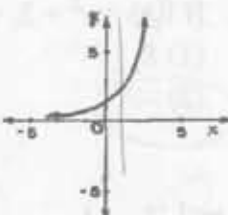
(1)



(3)



(2)



(4)

8. Which equation does not represent a function?

(1)  $y = 2x$

(2)  $y = x^2 + 10$

(3)  $y = \frac{10}{x}$

(4)  $x^2 + y^2 = 9$

Circle

9. If
- $f(x) = x^{-2} + x^0$
- , find the value of
- $f(2)$

$$2^{-2} + 2^0 =$$

$$\frac{1}{2^2} + 1 = \frac{1}{4} + 1$$

$$\frac{1}{4} + \frac{4}{4} = \frac{5}{4}$$

(1 1/4)