



MATHS

BOOKS - CENGAGE MATHS (ENGLISH)

RELATIONS AND FUNCTIONS

Others

1. If f is a linear function and $f(2)=4, f(-1)=3$ then find $f(x)$



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2. A function is defined as $f(x) = \frac{x^2 + 1}{3x - 2}$. Can $f(x)$ take a value 1 for any real x ? Also find the value (s) of x for which $f(x)$ takes the value 2.



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3. A function is defined as $f(x) = x^2 - 3x$. Find the value of $f(2)$. Find the value of x for which $f(x) = 4$.



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4. Find the value of x^2 for the given values of x .

(i) $x < 3$ (ii) $x > -1$ (iii) $x \geq 2$ (iv) $x < -1$



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5. Find the value of $1/x$ for the given values of x .

$x > 3$ (ii) $x < -2$ (iii) $x \in (-1, 3) - \{0\}$



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6. Find the values of x for which the following functions are defined,. Also find all possible values

which functions take. $f(x) = \frac{1}{x+1}$ (ii)

$$f(x) = \frac{x-2}{x-3} \quad \text{(iii)} \quad f(x) = \frac{2x}{x-1}$$



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7. If

$$f(x) = \begin{cases} x^3, & x < 0 \\ 3x - 2, & 0 \leq x \leq 2 \\ x^2 + 1, & x > 2 \end{cases}$$

, then find the value of $f(-1) + f(1) + f(3)$.

Also find the value (s) of x for which $f(x) = 2$.



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8. Find all the possible values of the following

expressions: $\frac{1}{x^2 + 2}$ (ii) $\frac{1}{x^2 - 2x + 3}$ (iii)

$$\frac{1}{x^2 - x - 1}$$



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9. Find all the possible the value of the following

expression. $\sqrt{x^2 - 4}$ (ii) $\sqrt{9 - x^2}$ (iii)

$$\sqrt{x^2 - 2x + 10}$$



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