Basic Question Practice Set 2 Basics JEE Main Crash Course Questions 1. Solution of $|x-1| \ge |x-3|$ is (1) $x \le 2$ (2) $x \ge 2$ (3) [1,3](4) [1,3)2. Solve for $x: \left| \frac{x^2+6}{5x} \right| \ge 1$ $(1) (-\infty, -3)$ (2) $(-\infty, -3) \cup (3, \infty)$ (3) Rongo /// mathongo /// mathongo /// mathongo (4) $(-\infty, -3] \cup [-2, 0) \cup (0, 2] \cup [3, \infty)$ athongo /// mathongo /// n 3. The solution set of the inequality, $2 - \log_2(x^2 + 3x) \ge 0$ is (1) [-4,1](3) $(-\infty, -3) \cup (1, \infty)$ mathons Set of all real values of x satisfying the in equation $\frac{\log_2(x^2-5x+4)}{\log_2(x^2+1)}$ (2) $(-\infty,1)$ - $\{0\}$ // mathongo // mathongo // mathongo (1) $\left(-\infty,\frac{3}{5}\right)-\{0\}$ (3) $\left(\frac{3}{5},\infty\right)$ $(4) (4, \infty)$ 5. The set of real values of x for which $\log_{0.2} \frac{x+2}{x} \le 1$ is _____ mathons $(1) \left(-\infty, \frac{-5}{2}\right] \cup (0, \infty)$ (2) $\left[\frac{5}{2}, +\infty\right)$ $(3) \ (-\infty, -2) \cup (0, \infty)$ (4) None of these 6. The solution set of $x - \sqrt{1 - |x|} < 0$, is (1) $\left[-1, \frac{-1+\sqrt{5}}{2}\right)$ (2) [-1,1](4) $\left(-1, \frac{-1+\sqrt{5}}{2}\right)$ /// mathongo /// mathongo /// mathongo 7. Let [x] denote the greatest integer $\leq x$. If f(x) = [x] and g(x) = |x|, then the value of $f\left(g\left(\frac{8}{5}\right)\right) - g\left(f\left(-\frac{8}{5}\right)\right)$ is (1)a2nongo ///. mathongo ///. mathongo ///. mathongo (2) -2(3) 1 (4) -1 8. If y = 3[x] + 1 = 4[x - 1] - 10, where $[\cdot]$ represents greatest integer function, then [x + 2y] is (1) 76 ongo /// mathongo /// mathongo (2) 61 thongo /// mathongo (3) 107 (4) 67 **9.** If $[x]^2 - 5[x] + 6 = 0$, where $[\cdot]$, denotes the greatest integer function, then (1) $x \in [3, 4]$. (2) $x \in (2,3]$. (3) $x \in [2, 3]$. (4) $x \in [2, 4)$. (5) $x \in R$. 10. Graph of $y = \{x\} + \{-x\}$ in the interval [-1, 2] is (where $\{\cdot\}$ denotes fractional part function).



