Questions JEE Main Crash Course

- 1. Find the integral solution of the inequality $5x 1 < (x + 1)^2 < 7x 3$.
 - (1) 2
 - (3) 4 hongo /// mathongo /// mathongo /// mathongo /// mathongo /// mathongo /// mathongo ///
- **2.** $(x-2)^4(x-3)^3(x-4)^2(1-x) \le 0$
 - (1) (1, 3) go /// mathongo /// mathongo /// (2) $(-\infty, 1) \cup (3, \infty)$ thongo /// mathongo /// mathongo ///
 - (3) $(-\infty, 1] \cup [3, \infty)$
- 3. Complete solution set of inequalities $1 \le \frac{x+1}{2x-1} < 2$ is wathongo wathongo wathongo wathongo wathongo wathongo wathough mathongo wathongo wathong
- (2) [1,2)(1) (1,2)
- (4) [1,2] mathonge mathonge mathonge mathon (3) (1,2]
- **4.** The negative integral value of x satisfying $\frac{1}{x^2} \frac{1}{x} \le \frac{2}{x+2}$ is
- 5. The number of positive integral solutions of $\frac{x^2(3x-4)^3(x-2)^4}{(x-5)^5(2x-7)^6} \le 0$ is ongo // mathongo // mathongo // mathongo //
 - (1) 4
 - (3) 2 hongo /// mathongo /// mathongo /// (4) 11 hongo /// mathongo /// mathongo /// mathongo ///
- **6.** The value of $7\log\left(\frac{16}{15}\right) + 5\log\left(\frac{25}{24}\right) + 3\log\left(\frac{81}{80}\right)$ is equal to
 - rathongo /// mathongo /// mathongo /// mathongo $(1) \log 2$
 - (3) 5
- 7. Solve $25^{\log_{10}x} = 5 + 4x^{\log_{10}5}$.
 - (1) 5(2) 100
- (3) 20 ongo /// mathongo /// mathongo /// (4) 10 ngo /// mathongo /// mathongo /// matho
- **8.** If $a = \log_{24} 12$, $b = \log_{36} 24$, $c = \log_{48} 36$ then abc + 1 equals
 - (1) 2acongo /// mathongo /// mathongo (2) 2bc ngo /// mathongo /// mathongo /// matho
 - (4) None of these (3) 2ab
- **9.** The solution set of the equation $\log_x 2 \log_{2x} 2 = \log_{4x} 2$ is mathongo ///. mathongo ///. mathongo ///. matho
- (1) $\left\{2^{-\sqrt{2}}, 2^{+\sqrt{2}}\right\}$ (2) $\left\{\frac{1}{2}, 2\right\}$
- (3) $\left\{\frac{1}{4}, 2^2\right\}$ // mathongo // mathongo // (4) None of these mathongo // mathongo // mathongo //
- **10.** The number of real solutions of the equation $\log_{10}{(7x-9)^2} + \log_{10}(3x-4)^2 = 2$ is
 - (2)121ongo /// mathongo /// mathongo /// matho (1) Thongo /// mathongo /// mathongo ///
 - (4) 4 (3) 3