

- (6) if $\frac{5x}{2x^2 + 5x + 1} = \frac{1}{3}$, then the value of $\left(x + \frac{1}{2x}\right)$ is
 (a) 10 (b) 20 (c) 5 (d) 15
- (7) if $x^3 + \frac{3}{x} = 4(a^3 + b^3)$ and $3x + \frac{1}{x^3} = 4(a^3 - b^3)$, then $a^2 - b^2$ is equal to
 (a) 0 (b) 1 (c) 2 (d) 4
- (8) if $x = 6 + \frac{1}{x}$ then the value of $x^4 + \frac{1}{x^4}$ is
 (a) 1442 (b) 1444 (c) 1446 (d) 1448
- (9) $x = \sqrt{5} + 2$, then the value of $\frac{x^4 - 1}{x^2}$ is
 (a) $8\sqrt{5}$ (b) $16\sqrt{5}$ (c) $24\sqrt{5}$ (d) $30\sqrt{5}$
- (10) the value of the expression
 $\left\{\frac{1}{(2^2-1)}\right\} + \left\{\frac{1}{(4^2-1)}\right\} + \left\{\frac{1}{(6^2-1)}\right\} + \dots + \left\{\frac{1}{(20^2-1)}\right\}$ is equal to
 (a) $\frac{9}{19}$ (b) $\frac{10}{19}$ (c) $\frac{10}{21}$ (d) $\frac{11}{21}$
- (11) the value of $(\sqrt{6} + \sqrt{10} - \sqrt{21} - \sqrt{35}) \times (\sqrt{6} - \sqrt{10} + \sqrt{21} - \sqrt{35})$ is
 (a) 7 (b) 9 (c) 10 (d) 11
- (12) When $a = 2.5$, $b = 1.5$, then find the value of $9a^2 + 16b^2 - 24ab =$
 ?
 (a) 6.25 (b) 22.5 (c) 2.25 (d) 62.5

(13) if $x^2 + \frac{1}{x^2} = 66$ then the value of $\frac{x^2 - 1 + 2x}{x} = ?$

- (a) ± 8 (b) 10, -6 (c) 6, -10 (d) ± 4

(14) if $a^2 + a + 1 = 0$ then the value of a^9 is:

- (a) 2 (b) 3 (c) 1 (d) 0

(15) if $x + \frac{2}{x} = 1$ then the value of $\frac{x^2 + x + 2}{x^2(1-x)}$ is:

- (a) 1 (b) -1 (c) 2 (d) -2