

CDS 1 2022


adda247
DEFENCE

30 Days

CRASH COURSE

MATHS | DAY-2

BY GOPAL SHARMA



If $x = \sqrt{3} + \sqrt{2}$, then the value of $\left(x + \frac{1}{x}\right)$ is:

- (a) $2\sqrt{2}$
- (b) $2\sqrt{3}$
- (c) 2
- (d) 3

If $x = 7 - 4\sqrt{3}$, then the value of $\left(x + \frac{1}{x}\right)$ is:

- (a) $3\sqrt{3}$
- (b) $8\sqrt{3}$
- (c) $14 + 8\sqrt{3}$
- (d) 14

If $x = (\sqrt{2} + 1)^{\frac{-1}{3}}$, the value of $\left(x^3 - \frac{1}{x^3}\right)$ is

- (a) 0
- (b) $-\sqrt{2}$
- (c) -2
- (d) $3\sqrt{2}$

If $x = \sqrt[3]{(2 + \sqrt{3})}$, then the value of $x^3 + \frac{1}{x^3}$ is:

- (a) 8
- (b) 9
- (c) 2
- (d) 4

If $x = 1 - \sqrt{2}$, the value of $\left(x - \frac{1}{x}\right)^3$ is

- (a) -8
- (b) 8
- (c) $2\sqrt{2}$
- (d) 1

If $x = \sqrt{5} + 2$, then the value of $\frac{2x^2 - 3x - 2}{3x^2 - 4x - 3}$ is equal to

- (a) 0.185
- (b) 0.525
- (c) 0.625
- (d) 0.785

If $x = 3 + 2\sqrt{2}$ and $xy = 1$, then the value of $\frac{x^2 + 3xy + y^2}{x^2 - 3xy + y^2}$ is

(a) $\frac{30}{31}$

(b) $\frac{70}{31}$

(c) $\frac{35}{31}$

(d) $\frac{37}{31}$

If $x = \sqrt{3} + \sqrt{2}$, then the value of $\left(x^2 + \frac{1}{x^2}\right)$ is

- (a) 4
- (b) 6
- (c) 9
- (d) 10

If $x = 3 + 2\sqrt{2}$, then the value of $x^2 + \frac{1}{x^2}$ is

- (a) 36
- (b) 30
- (c) 32
- (d) 34

If $x = 2 + \sqrt{3}$, then $x^2 + \frac{1}{x^2}$ is equal to

- (a) 10
- (b) 12
- (c) -12
- (d) 14

If $a = 2 + \sqrt{3}$, then the value of $\left(a^2 + \frac{1}{a^2}\right)$ is

- (a) 12
- (b) 14
- (c) 16
- (d) 10

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If $x = 3 + \sqrt{8}$, then $x^2 + \frac{1}{x^2}$ is equal to

- (a) 38
- (b) 36
- (c) 34
- (d) 30

If $x = \sqrt{3} + \sqrt{2}$, then the value of $\left(x^3 + \frac{1}{x^3}\right)$ is

- (a) $6\sqrt{3}$
- (b) $12\sqrt{3}$
- (c) $18\sqrt{3}$
- (d) $24\sqrt{3}$

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If $x = \sqrt{3} + \sqrt{2}$, then the value of $x^3 - \frac{1}{x^3}$ is:

(a) $14\sqrt{2}$

(b) $14\sqrt{3}$

(c) $22\sqrt{2}$

(d) $10\sqrt{2}$

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If $x = 3 + 2\sqrt{2}$, then $\frac{(x^6 + x^4 + x^2 + 1)}{x^3}$ is:

- (a) 216
- (b) 192
- (c) 198
- (d) 204