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Algebra



If $x + \frac{1}{x} = 10$, then find the value of $\frac{7x}{x^2+1-8x}$.

- (a) 3.5
- (b) 4.5
- (c) 2.5
- (d) 5.5



If $x + \frac{81}{x} = 18$ where $x > 0$, then the value of $x^2 + \frac{162}{x^2}$ is:

- A) 78
- B) 83
- C) 85
- D) 81



If $x^{2023} + \frac{1}{x^{2023}} = 10$, then what is the value of $x^{4046} + \frac{1}{x^{4046}}$?

- A) 98
- B) 100
- C) 96
- D) 102



If $x = 7 - 4\sqrt{3}$, then find $(x^2 + \frac{1}{x^2})$?

- A) 195
- B) 197
- C) 196
- D) 194



If $\frac{1}{(x-2)} + x = 8$, then what is the value of $\frac{1}{(x-2)^2} + (x-2)^2$?

- A) 38
- B) 36
- C) 40
- D) 34



If $(x - \frac{1}{x}) = 7.5$, what is the value of $(x^2 + \frac{1}{x^2})$

- A) 54.25
- B) 58.25
- C) 60.25
- D) 56.25



If $x + \frac{1}{x} = 9$, then find $x^4 + \frac{1}{x^4}$.

- A) 5431
- B) 6561
- C) 6156
- D) 6239



If $x - 5\sqrt{x-1} = 0$, then $x^2 + \frac{1}{x^2}$ is equal to:

- A) 625
- B) 731
- C) 729
- D) 727



If $5x + \frac{1}{3x} = 4$, then what is the value of $9x^2 + \frac{1}{25x^2}$?

- a) 174/125
- b) 144/125
- c) 114/25
- d) 119/25



If $(2x - \frac{3}{x}) = 2$ then what is the value of $(16x^4 + \frac{81}{x^4})$?

- a) 184
- b) 328
- c) 180
- d) 220





Thank You