

ALGEBRA

CANSU OLCE

A STAR MATHS (www.astarmaths.com.au)

1. $a + (a - (-a)) \div (-a) + 2 = ?$

2. $x - y - (x - y - (-x)) = ?$

3. $a - [a - (a - (-a))] = ?$

4. $-x - [-x + (x - (-x))] = ?$

5. $a - [a - (2a - 3a)] - 2a = ?$

6. $-x - [x - (3x - (-2x))] - 4x = ?$

7. $x - \{y - x - [y - 2x - (2y - x)]\} + 2y = ?$

8. $a - [a - (a + b)] - (a - b) = ?$

9. $a - b - [a - [a + b - a - (a + b)]] = ?$

10. $x - \{-x - [y - z - (x - y)] + y\} + z = ?$

11. If $a = 2$, find $a^a - a^3 - a$.

12. If $x = -2$, find $x^2 - 2x + 1$.

13. If $a = 100$ and $b = -50$, find $(a - b) \div (a + b) - b$.

14. If $a = 3$ and $b = -2$, find $a^2 - b^3 + ab$.

15. If $x = -3$, find $x - [x - (x + 3)]$.

16. If $x = -2$, find $x^{-2} - x^{-1} + x + x^2$.

17. If $a = -\frac{2}{3}$, find $\frac{a \div \frac{1}{a} + 1}{5 + a}$.

18. $a \neq 0$

$b \neq 0$

$a + b = 0$

Find $\frac{a + 2b}{a - b}$.

19. $a - b = 2 - c$

Find $\frac{c - 2}{a - b} - \frac{4 - 2a}{c - b}$.

20. $(a + 1)(a^2 + b) - (b + 1)(a^2 + b) + (b - a)(a^2 + b) = ?$

ANSWER KEY

1. a
2. $-x$
3. $2a$
4. $-2x$
5. $-3a$
6. $-x$
7. x
8. $2b$
9. $-a-b$
10. $x+y$
11. -6
12. 9
13. 53
14. 11
15. 6
16. $7/4$
17. $1/3$
18. $-1/2$
19. -3
20. 0

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