

Unit 1 - Foundations of Algebra TestEvaluate the expression when $x = 3$, $y = 4$ and $z = 5$.

1. $x + 5y^2$

2. $9z + 7y - 2$

3. $(4x + 5y) \div 7$

4. $4x^3 + 5z$

5. $\frac{5}{y} - \frac{z}{4}$

6. $x^4 - 2(y - 4)$

7. $8 - (-5) + 2x$

8. $|-5| - 9x + 2$

9. $-8y^2 + 9z + 4$

Simplify each expression.

10. $(-x)^3(2)^2$

11. $8(x - 4)$

12. $(6 - y)(12)$

13. $-11(x + 7)$

14. $5(3 - x) + x$

15. $2x + 5(5 - 14x)$

Tell whether the given equation has the ordered pair as a solution.

16. $y - 2x = 6$ (2, 13)

17. $y = 2x - 3$ (2, 1)

18. $x + 3 = y - 7$ (3, 12)

19. $3x - 1 = 8y$ (4, 1)

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Write each algebraic expression.

- 20. The ratio of sixteen and x .

- 21. The sum of a number y and five is equal to seven.

- 22. The quotient of x and three is four times the number y .

- 23. Three times the number x is twenty one.

Determine whether the equation is TRUE, FALSE or OPEN. Explain.

- 24. $(3 \cdot 2)^3 = 3 \cdot 2^3$
- 25. $8 - 6 = s - 8$
- 26. $8 = y^2 + 3$

- 27. $\frac{12}{3} = 4$
- 28. $9x = x^3$
- 29. $38 \cdot 0.1 = 0.38$

Use a table, an equation, and a graph to represent the relationship.

- 30. Kyle makes 5 baskets every hour.

