

Algebra 2 Level 2 and Level 3 **Note: Selected answers on on the last page. Show all work !!!****Evaluate each expression. Show all steps that lead to your answer.**

1) $2 + 6(3 - 1)^2$

2) $2 + 10 \div 5 + 5 \times 4$

3) $6 - 5 + 18 \div -3 \times -3$

4) $(-5 + 3)^2 \cdot -3 \cdot 2$

5) $10 \div -5 + (-1 - 5)^2$

Evaluate each using the values given. Show all steps that lead to your answer.

6) $4y - \frac{zy}{6}$; use $y = 5$, and $z = 6$

7) $zx^2 + 4 + x$; use $x = 4$, and $z = 2$

8) $\frac{b^3}{4}(b - c)$; use $b = 4$, and $c = 2$

9) $y + z - (1 + y^2)$; use $y = -3$, and $z = 2$

10) $\frac{y}{2}(y - (z + x))$; use $x = 5$, $y = -2$, and $z = 1$

11) $y^3 - \frac{3x}{3}$; use $x = -1$, and $y = -2$

Simplify each expression. For examples 15 - 18, show all steps that lead to your answer.

12) $7x + 7 + x - 4$

13) $5v + 8 - 4x - 3v - 9x$

14) $2y + 10x - 9 + 5y - 4x + 1$

15) $6(m + 8) + 5m$

16) $-7(4 - 2p) - 7p$

17) $7(k - 2) + 2(4 - 4k)$

18) $-3(8 - 5x) - 6(5 + 2x)$

Solve each equation. Show all steps that lead to your answer.

19) $-20 = p - 4 + 7p$

20) $7b - 6b - 16 = 4b - 4$

$$21) \ 272 = n + 6(6n - 4)$$

$$22) \ -3(7k + 1) = 8(-3k + 3)$$

$$23) \ 4(2 + 5x) = 12x - 6(x + 8)$$

$$24) -(3p - 11) - 3(6 - 3p) = 10p - 2 - 1$$

How can each number be classified? Circle all that apply.

$$25) 12$$

Real Number

Rational Number

Irrational number

Natural Number

Whole Number

Integer

$$26) \frac{1}{5}$$

Real Number

Rational Number

Irrational number

Natural Number

Whole Number

Integer

$$27) -15$$

Real Number

Rational Number

Irrational number

Natural Number

Whole Number

Integer

Circle the property that is illustrated by each of the following statements.

28) $5x + 6 = 6 + 5x$

Commutative Property of Addition

Associative Property of Addition

Distributive Property

Additive Identity Property

29) $4(5 \cdot 3) = 4(3 \cdot 5)$

Commutative Property of Multiplication

Associative Property of Multiplication

Distributive Property

Multiplication Identity Property

30) $6 \cdot \frac{1}{6} = 1$

Commutative Property of Multiplication

Associative Property of Multiplication

Inverse Multiplication Property

Distributive Property

Answers to Algebra 2 Level 2 and Level 3

- | | | | |
|--------------------|-------------|----------------|----------------|
| 1) 26 | 2) 24 | 3) ?? | 4) -24 |
| 5) ?? | 6) 15 | 7) 40 | 8) 32 |
| 9) -11 | 10) ?? | 11) ?? | 12) $8x + 3$ |
| 13) $2v - 13x + 8$ | 14) ?? | 15) $11m + 48$ | 16) $-28 + 7p$ |
| 17) $-k - 6$ | 18) ?? | 19) $\{-2\}$ | 20) $\{-4\}$ |
| 21) ?? | 22) $\{9\}$ | 23) ?? | 24) $\{-1\}$ |
| 25) | | 26) | |
| 27) | ?? | 28) | |
| 29) | ?? | 30) | ?? |