

Algebra I
Worksheet
Algebraic Expressions
Order of Operations

NAME: _____
DATE: _____ HOUR: _____

Write an algebraic expression for each.

1. x less 6 $x - 6$
2. 6 less than x $x - 6$
3. the product of 49 and k
4. the sum of 19 and $40c$
5. 14 divided equally into x parts
6. the difference between x and y
7. the product of p and w
8. $19p$ increased by $3q$
9. 100 take away $8r$
10. 4 times w

Evaluate each expression if $a = 3$ and $b = 4$. Show your work step.

- | | | | |
|----------------|---------------|----------------|---------------|
| 1. $5a + 7$ | 2. $4a - 8$ | 3. $9a + 23$ | 4. $11a$ |
| 5. $5b + 3$ | 6. $-4b - 2$ | 7. $9b + 2$ | 8. $-12b$ |
| 9. $a + b$ | 10. $-4a + b$ | 11. $9a + b$ | 12. $-5a + b$ |
| 13. $-5a + 5b$ | 14. $4a - 3b$ | 15. $9a + 13b$ | 16. $-4a$ |

Evaluate each expression using the **order of operations**. Show your work.

1.) $5 + 7 \cdot 4$

8.) $\frac{(2 \cdot 5)^2 + 4}{3^2 - 5}$

2.) $8 \div (2 + 2) \cdot 7$

9.) $2[5^2 + (36 \div 6)]$

3.) $6^2 + 3 \cdot 7 - 9$

4.) $162 \div [6(7 - 4)^2]$

10.) $4(3 + 5) - 5 \cdot 4$

5.) $\frac{7 + 3^2}{4^2 \cdot 2}$

Evaluate.

1.) 3^4

2.) 11^3

3.) 2^4

4.) 2^5

5.) 10^3

6.) $22 \div 11 \cdot 9 - 3^2$

7.) $7 \cdot 9 - 4(6 + 7)$