

**Powell High School  
Honors Algebra I  
Summer Assignment**

Name \_\_\_\_\_

Complete all problems below. Use pencil to complete all math assignments. Show all steps. This assignment will be due on the first day of class, and will be entered as a homework assignment. Should you need assistance on any problem, please go to the following link:

[http://www.mathtv.com/videos\\_by\\_playlist?c=1&playlist\\_id=28621](http://www.mathtv.com/videos_by_playlist?c=1&playlist_id=28621)

1. Simplify  $5 + x + 3$

7. Simplify each expression as much as possible.

a.  $7 + (-3) - 5$     b.  $8 - (-2) - 6$     c.  $-2 - (-3 + 1) - 5$

2. Simplify:  $5(4x)$

8. Multiply:  $-3(-5)$

3. Multiply:  $\frac{1}{2}(3x + 6)$

9. Simplify.

a.  $\frac{2(-3) + 4}{12}$     b.  $\frac{5(-4) + 6(-1)}{2(3) - 4(1)}$

4. Give the opposite of each number.

a. 5    b. -3    c.  $\frac{1}{4}$     d. -2.3

10. Simplify:  $\frac{-15 + 5(-4)}{12 - 17}$

5. Give the reciprocal of each number.

a. 5    b. 2    c.  $\frac{1}{3}$     d.  $\frac{3}{4}$

11. Simplify  $\frac{-5(-4) + 2(-3)}{2(-1) - 5}$

6. Simplify:  $[-3 + (-10)] + [8 + (-2)]$

12. Simplify:  $12\left(\frac{2}{3}x\right)$

**Powell High School  
Honors Algebra I  
Summer Assignment**

Name \_\_\_\_\_

13. Find each value when  $x = 3$ .

a.  $\frac{x^3 - 8}{x^2 - 4}$

b.  $\frac{x^2 + 2x + 4}{x + 2}$

c.  $x - 2$

d.  $x + 2$

20. Solve  $7.3 + x = -2.4$

14. Simplify.

a.  $|8 - 3|$    b.  $|3 \cdot 2^3 + 2 \cdot 3^2|$    c.  $|9 - 2| - |8 - 6|$

21. Solve  $|2a - 1| = 7$

15. Solve for  $a$ :  $a - \frac{3}{4} = \frac{5}{8}$

22. Solve  $2(3x - 4) = 3 + 6x$

16. Solve:  $-\frac{4}{5}x = \frac{8}{15}$

24. Solve  $-15 + 3x = 3(x - 5)$

17. Solve:  $4a + 5 = 2a - 7$

25. Which ordered pairs,  $(2, 3)$ ,  $(1, 5)$ ,  $(-2, -4)$ , are solutions to  $y = 3x + 2$ ?

18. Solve:  $2(x - 4) + 5 = -11$

19. Solve  $\frac{2}{3}x + \frac{1}{2} = -\frac{3}{8}$