

## NTID 2 ACT Review

Date \_\_\_\_\_ Period \_\_\_\_\_

**Simplify each expression.**

1)  $8a + 6a$

3)  $8x - 8(x - 7)$

5)  $-2n - 2(n + 8)$

7)  $-6(5k - 1) + 4(7k - 6)$

2)  $n - 9 - 5$

4)  $-7(5k + 5) - 4$

6)  $-5(7x - 6) + 5(x + 3)$

8)  $n(6n - 6) + 7(7n + 2)$

**Find the distance between each pair of points.**

9)  $(6, -5), (1, -8)$

11)  $(1, 8), (-4, -8)$

10)  $(4, 7), (7, -7)$

12)  $(2, 7), (4, 6)$

**Simplify. Write each answer in scientific notation.**

13)  $\frac{6.3 \times 10^1}{2.23 \times 10^{-2}}$

15)  $\frac{4 \times 10^0}{9.8 \times 10^{-5}}$

14)  $\frac{4.5 \times 10^3}{2.44 \times 10^{-4}}$

**Solve each equation.**

16)  $6(3 - 3m) = -3(m + 9)$

18)  $-8(1 + 4n) = 8(n + 4)$

20)  $-2(3 + 4p) = -2(4p - 8)$

22)  $-(12 + 4a) = -9(a + 3)$

24)  $12(1 - 3m) - 12(3 - 2m) = -6m + 5 + 3 + 2m$

25)  $-12(x - 5) = 6(-2x + 10) - 4$

17)  $4 - (2 + 2x) = 3(12 - 12x)$

19)  $2(-2n - 9) + 9(n - 2) = 4n - 12 - 10$

21)  $-8(4p - 7) = -8(3p + 1)$

23)  $-9(b + 6) + 5b = -4(b + 6)$

**Solve each equation. Remember to check for extraneous solutions.**

26)  $\frac{n - 1}{2n^2} = \frac{1}{3n^2} + \frac{1}{6n}$

27)  $6\sqrt{n - 3} = 6$

**Simplify. Write each answer in scientific notation.**

28)  $(8.3 \times 10^{-4})^4$

29)  $(9 \times 10^{-3})^5$

30)  $(6 \times 10^{-5})^4$

**Factor each completely.**

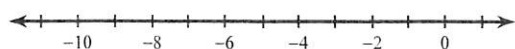
31)  $4m^2 - 16$

32)  $n^2 + 2n - 80$

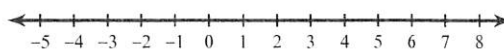
33)  $v^2 - 5v - 14$

**Solve each compound inequality and graph its solution.**

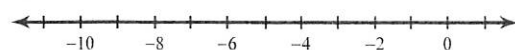
34)  $x + 3 \geq -5$  and  $-5 - 3x > -2$



35)  $-67 \leq 3 - 10x \leq 43$



36)  $8 + 5k < -22$  or  $-9 + 12k > -57$



37)  $-20 \leq -5k - 5 < 15$

