

Lloyd

Algebra 2

Name _____ ID: 1

Weather Packet Day 1 - Must show work!

Date _____ Period _____

Solve each equation.

1) $-a + 23 = -6(a + 2)$

2) $-8x - 22 = -(8 + 6x) - 8$

3) $8(v + 4) = v + 39$

4) $5n + 8(3 + 8n) = 8(n + 3)$

5) $8(8x - 4) - 8x = 8(x + 2)$

6) $-4(2r + 3) = 3(1 - r)$

Solve each system by elimination.

7) $-8x - 3y = -2$
 $-16x - 7y = -2$

8) $-4x - 12y = -4$
 $-5x + 4y = 14$

9) Shreya and Heather are selling cookie dough for a school fundraiser. Customers can buy packages of sugar cookie dough and packages of double chocolate cookie dough. Shreya sold 10 packages of sugar cookie dough and 2 packages of double chocolate cookie dough for a total of \$90. Heather sold 14 packages of sugar cookie dough and 6 packages of double chocolate cookie dough for a total of \$158. Find the cost each of one package of sugar cookie dough and one package of double chocolate cookie dough.

10) Anjali and Amy each improved their yards by planting hostas and ivy. They bought their supplies from the same store. Anjali spent \$35 on 1 hosta and 6 pots of ivy. Amy spent \$210 on 14 hostas and 14 pots of ivy. Find the cost of one hosta and the cost of one pot of ivy.

Weather Packet Day 2 - Must show work!

Date _____ Period _____

Solve each equation.

1) $5 + 2x = -4 - 3(8x - 3)$

2) $-5 + 7a = 4(1 + 4a)$

3) $27 - 5x = -7(x - 3)$

4) $-8n - 4(1 - 3n) = 7(n - 7) - 8n$

5) $2(-5 - n) = -4(2n + 4)$

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

Solve each system by elimination.

7)
$$\begin{aligned} 2x - 4y &= 20 \\ -5x - y &= -6 \end{aligned}$$

8)
$$\begin{aligned} 9x + 8y &= 21 \\ -2x - 4y &= 2 \end{aligned}$$

- 9) The indoor climbing gym is a popular field trip destination. This year the senior class at High School A and the senior class at High School B both planned trips there. The senior class at High School A rented and filled 14 vans and 7 buses with 462 students. High School B rented and filled 7 vans and 2 buses with 186 students. Every van had the same number of students in it as did the buses. How many students can a van carry? How many students can a bus carry?
- 10) Mofor and Totsakan are selling fruit for a school fundraiser. Customers can buy small boxes of oranges and large boxes of oranges. Mofor sold 9 small boxes of oranges and 10 large boxes of oranges for a total of \$125. Totsakan sold 13 small boxes of oranges and 2 large boxes of oranges for a total of \$81. Find the cost each of one small box of oranges and one large box of oranges.

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Weather Packet Day 3

Simplify (remember $i^2 = -1$).

1) $-4 + (-3 + i)$

2) $(3 + i) + (6i)$

3) $(i) - (2 + 6i)$

4) $4 - (3 - 7i)$

5) $(3 + 6i)(5 - 8i)$

6) $(-3 + 7i)^2$

7) $(5 - 5i)(-3 - 3i)$

8) $(4i)(5i)(-6 - 5i)$

Simplify the following radicals (you may want to break it down using a tree). No decimals.

9) $8\sqrt{36}$

10) $7\sqrt{320}$

11) $3\sqrt{384}$

12) $3\sqrt{448}$

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Weather Packet Day 4

Solve each equation by factoring.

1) $v^2 - 3v + 2 = 0$

2) $n^2 + 6n + 5 = 0$

3) $x^2 - 3x - 10 = 0$

4) $a^2 - a - 12 = 0$

5) $x^2 - 13x + 40 = 0$

6) $m^2 - 3m - 4 = 0$

7) $10n^2 + 41n + 21 = 0$

8) $3a^2 - 17a - 6 = 0$

9) $35x^2 - 96x + 64 = 0$

10) $3b^2 + 20b + 12 = 0$

Weather Packet Day 5 - Show your work for full credit Date _____ Period _____

Simplify each expression.

1) $(5x + 5x^4 - 3x^2) - (8x - 6x^4 + 5x^2)$

2) $(6 + 3m^3 + 2m^2) + (8m^3 + m^4 - 7m^2)$

3) $(8v - v^2 + 4) + (7 + v + 3v^4)$

4) $(3n^2 - 5 - 5n^4) + (4n^2 + n^4 + 8)$

Find each product.

5) $(n - 1)(4n + 6)$

6) $(7x + 1)(6x + 7)$

7) $(6a^2 - a - 5)(3a - 2)$

8) $(4x^2 - 6x - 5)(4x + 3)$

Divide.

9) $(x^3 + 11x^2 + 20x - 52) \div (x + 6)$

10) $(4x^3 + 42x^2 + 23x + 33) \div (x + 10)$

11) $(10x^3 + 61x^2 - 2x - 40) \div (x + 6)$

12) $(2x^3 + 9x^2 - 40x - 38) \div (x + 7)$