



Dear Rising Form II Algebra I, Part II Students,

Attached to this letter is a summer work packet for you. The packet is divided into three sections – June, July and August to encourage you to do work throughout the summer rather than saving it for the last weeks of August. Practicing concepts at regular intervals will help you retain the information better and reduce some of the dreaded summer slide. This packet is highly recommended!

We hope you enjoyed your journey through the first part of Algebra this year!

Best,

Ms. Tkac, Mr. Meyer and Mr. Romero

Name \_\_\_\_\_

**Rising Form II Algebra I, Part 2 Summer Work  
June Problems**

**Expressions**

**Simplify the following expressions.**

1.  $7p - 3 + 8p$

2.  $-18w + 12n + 6w - 20n$

3.  $15(2x + 4)$

4.  $9(3x - 1) + 4(8 - 5x)$

**Linear Equations**

*Solve for the variable in the following equations.*

5.  $6m - 7 = 35$

6.  $-4 = 5 - \frac{3}{8}c$

7.  $13(v + 3) = -91$

8.  $3y + 12 - y = -32$

9.  $-42 = 2(1 + 3x) + 4(x + 4)$

10.  $4n - 7(n - 2) - 11 = 3(1 - n)$

11.  $\frac{4}{5} = \frac{k+7}{7}$

12.  $\frac{4}{3} = \frac{x-10}{x-7}$

## Solving Inequalities

Solve and graph each inequality.

$$13. \frac{n}{6} + 10 \geq 9$$

$$14. -62 > 10 + 9a$$

$$15. 2(1 + 8k) + 8 > -86$$

$$16. -4(8m + 1) - 4 \geq -8m + 40$$

## Polynomials

Use the distributive property or a generic rectangle to multiply each expression.

$$17. (x + 4)(x + 7) =$$

$$18. (x + 2)(x - 10) =$$

$$19. (2x + 5)(x + 11) =$$

$$20. (2x + 3)(2x^3 + 8) =$$

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**Rising Form II Algebra I, Part 2 Summer Work  
July Problems**

**Expressions**

**Simplify the following expressions.**

1.  $-9k + 4 + 2k$

2.  $1 - 5m - 9 - 8m$

3.  $-2(p - 3)$

4.  $-2(4k - 1) + 5(-10 - 4k)$

**Linear Equations**

*Solve for the variable in the following equations.*

5.  $0 = -1 + \frac{p}{14}$

6.  $-19 = -7 - \frac{1}{3}m$

7.  $90 = -10(c - 6)$

8.  $12p - 7 - 8p = -19$

9.  $-64 = -6(r - 7) - 7(r + 4)$

10.  $-8(8 + 7n) = 4(6n + 4)$

$$11. \frac{10}{8} = \frac{5}{x-7}$$

$$12. \frac{4}{n+8} = \frac{5}{n+6}$$

### Solving Inequalities

Solve and graph each inequality.

$$13. 8 + \frac{x}{3} \leq 5$$

$$14. -6y + 1 > -35$$

$$15. 93 \leq 3(5 + 4h) - 6$$

$$16. -12 + 7w > -3(2w - 8) + w$$

### Polynomials

Use the distributive property or a generic rectangle to multiply each expression.

$$17. (x - 1)(x + 7) =$$

$$18. (x - 3)(x + 4) =$$

$$19. (4x + 1)(2x + 8) =$$

$$20. (x^2 + 3)(x^3 + 5) =$$

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**Rising Form II Algebra I, Part 2 Summer Work  
August Problems**

**Expressions**

**Simplify the following expressions.**

1.  $m + 9 + 3m - 14$

2.  $18 - 14y + 12 + 2y$

3.  $-5(x + 3)$

4.  $7(10v + 5) - 4(-v - 6)$

**Linear Equations**

*Solve for the variable in the following equations.*

5.  $-1 = -7 + 2x$

6.  $5 + \frac{1}{2}w = 15$

7.  $16 = -2(n - 7)$

8.  $3x + 9 - 12x = -81$

9.  $4(5m - 7) + 5(3m + 3) = -48$

10.  $-8k - 2(k + 4) = -2(4 + 4k)$

$$11. \frac{9}{2} = \frac{k+6}{4}$$

$$12. \frac{n-4}{7} = \frac{n+9}{8}$$

### Solving Inequalities

Solve and graph each inequality.

$$13. 5 + 9x \leq 50$$

$$14. 6x + 3 < 99$$

$$15. -5v + 2(2 + 7v) \leq 49$$

$$16. 7(p - 6) < -2 - p$$

### Polynomials

Use the distributive property or a generic rectangle to multiply each expression.

$$17. (x - 6)(x - 11) =$$

$$18. (x + 9)(x - 12) =$$

$$19. (7x + 2)(3x + 1) =$$

$$20. (x^4 + 5)(2x + 12) =$$

**ANSWER KEY**

**Rising Form II Algebra I, Part 2 Summer Work**

**June Problems**

1.  $15p - 3$
2.  $-12w - 8n$
3.  $30x + 60$
4.  $7x + 23$
5.  $m = 7$
6.  $c = 24$
7.  $v = -10$
8.  $y = -22$
9.  $x = -6$
10. *no solution*
11.  $k = -\frac{7}{5}$  or  $-1.4$
12.  $x = -2$
13.  $n \geq -6$
14.  $a < -8$
15.  $k > -6$
16.  $m \leq -2$
17.  $x^2 + 11x + 28$
18.  $x^2 - 8x - 20$
19.  $2x^2 + 27x + 55$
20.  $4x^4 + 6x^3 + 16x + 24$

**July Problems**

1.  $-7k + 4$
2.  $-8 - 13m$
3.  $-2p + 6$
4.  $-28k - 48$
5.  $p = 14$
6.  $m = 36$
7.  $c = -3$
8.  $p = -3$
9.  $r = 6$
10.  $n = -1$
11.  $x = 11$
12.  $n = -16$
13.  $x \leq -9$
14.  $a < -8$
15.  $k > -6$
16.  $m \leq -2$
17.  $x^2 + 11x + 28$



18.  $x^2 - 8x - 20$

19.  $2x^2 + 27x + 55$

20.  $4x^4 + 6x^3 + 16x + 24$

**August Problems**

1.  $4m - 5$

2.  $30 - 12y$

3.  $-5x - 15$

4.  $74v + 59$

5.  $x = 3$

6.  $w = 20$

7.  $n = -1$

8.  $x = 10$

9.  $m = -1$

10.  $k = 0$

11.  $k = 12$

12.  $n = 95$

13.  $x \leq 5$

14.  $x < 16$

15.  $v \leq 5$

16.  $p < 5$

17.  $x^2 - 17x + 66$

18.  $x^2 - 3x - 108$

19.  $21x^2 + 13x + 2$

20.  $2x^5 + 12x^4 + 10x + 60$