



FAIRFAX COUNTY PUBLIC SCHOOLS

Kilmer Middle School

8100 Wolftrap Road
Vienna, Virginia 22182

June 18, 2009

Dear Rising Algebra I students, and Parents/Guardians of Rising Algebra I students,

This summer packet has been designed to help keep your mathematics skills sharp over the summer as well as to let your Algebra I teacher know that you have the necessary pre-requisite skills for the Algebra I course. The concepts in the review packet were all covered in both the Math 7 and Math 7 Honors classes. Students may use a scientific calculator (*not* a graphing calculator) to complete the problems.

The work is due on the first Friday of school, September 11, 2009. Teachers will collect the packet then. There will be a graded assignment within the first two weeks of school that will cover topics addressed in the summer packet.

If you have any questions regarding this packet please contact Mr. Erler, the Mathematics Department Chair (rich.erler@fcps.edu), or Mrs. Pyatt, our mathematics resource specialist (emily.pyatt@fcps.edu).

Have a wonderful summer.

See you in September,

Algebra I teachers

Algebra I Summer Packet
Operations w/Rational Numbers

Name _____

Date _____

1. Express as a mixed number:

$$2\frac{1}{2} + 3\frac{2}{3}$$

2. Express as a mixed number: $4\frac{1}{8} - 2\frac{3}{4}$

3. Simplify: $2\frac{1}{2} \times 3\frac{1}{5}$

4. Simplify: $4\frac{1}{2} \div (-2\frac{1}{4})$

5. Add: $3.28 + 17.5 + 39$

6. Subtract: $275.4 - 187.93$

7. Multiply: 4.08×0.98

8. Divide: $12.98 \div 2.36$

Simplify.

9. $-33 + 93$

10. $57 + (-72)$

11. $25 - 58$

12. $(-13) - (-7)$

13. $(12)(-9)$

14. $(-5)(-11)$

15. $54 \div (-6)$

16. $-40 \div (-8)$

Algebra I Summer Packet

Order of Operations

Name _____

Date _____

1. Simplify: $3 + 4 \cdot 7 - 9$

2. Simplify: $5 \cdot (3 + 2 \cdot 8)$

3. Simplify: $-3 \cdot (5 - 8 \cdot 4) + 4$

4. Simplify: $-6 \cdot (10 - 3^2)$

5. Simplify: $-5 \cdot (-4 + 9) \div 4 + 6$

6. Simplify: $9 - 4(3 - 2.4)^2$

7. Simplify: $2(8 - 9 \cdot 3)(-4 + 5 \cdot 7 + 6)$

8. Simplify $3(4 + 5) - 6$.

9. Simplify: $30 - 4 \div 2 + 3 \cdot 5$

10. Simplify: $14 - 12 \div 6 + 4$

11. Simplify: $2 + 5 \cdot 7 - 7$

12. Simplify: $13 \cdot 5 + 17 \cdot 5$

13. Express in simplest form:

$$\frac{-3(-2 + 7)}{3 + 2}$$

14. Simplify: $7 + 3^2 \cdot 4 - 2(14 - 8 \div 2)$

15. Express in simplest form:

$$8 + 18 \div 3 \div 6 \times (18 - 5 - 4)$$

16. Simplify: $4 + 6 \div 2 \times 8 - 3$

Algebra I Summer Packet
Evaluating Variable Expressions

Name _____

Date _____

1. Evaluate $3m + 5$ if $m = 7$.

2. Evaluate $5 \cdot (2n - 3)$ if $n = 5$.

3. Evaluate $3 + 2(a - 4)$ if $a = -7$.

4. Evaluate $a^2 + ab$ if $a = 4$ and $b = -2$.

5. If $a = 5$ and $b = 2$, evaluate $\frac{a + b}{2a - 3}$.

6. Evaluate $6m + 2$ if $m = \frac{2}{3}$.

7. Evaluate $3x^2 + y$ if $x = 2$ and $y = 5$.

8. Evaluate $2 + 6(x - 5)$ if $x = -2$.

9. Evaluate $x^2 + 2xy + y^2$ if $x = 3$ and $y = 7$.

10. Evaluate $(a + b)(a - b)$ if $a = 30$ and $b = 2$.

Algebra I Summer Packet
Solving Equations w/Rational #s

Name _____

Date _____

Solve.

1. $n + 51 = 74$

2. $13 = y + 20$

3. $21 + m = 16$

4. $m - 15 = -4$

5. $k - 26 = -37$

6. $-65 + y = -45$

7. $39 = 3d$

8. $\frac{z}{5} = 12$

9. $\frac{1}{15}c = 8$

10. $12 = 96p$